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JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

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ORIGINAL ARTICLES

THE RELATION BETWEEN DISEASES OF THE SKIN AND DISEASES OF OTHER ORGANS OF THE BODY.*

Oration on Medicine.

BY JOHN H. DUNCAN, M. D., ST. LOUIS, MO.

An oration on medicine, even in its restricted sense, is a most exhaustive subject, and to select some topic connected with it, for your consideration, which might be of interest and value, has been a most difficult task. To undertake to consider even casually, the improvements and discoveries in medicine, as distinguished from surgery, obstetrics, gynaecology, etc., during the last few years alone, would require more time than is allotted this paper and had best fall to the duty of some one else.

I also doubt the propriety of it, for I think I would be discrediting your good sense to attempt it. Such papers on individual subjects will be presented to you, during this session, by men more competent than myself and who take special interest in such matters.

Shall I occupy the time on medical education? Emphatically, *no*. For thirty-three years, to my knowledge, you have had your patience taxed annually on this subject, by men finding fault with the methods of conducting our schools, and at the same time offering no suggestions of value for their betterment. There is certainly a limitation to repetition and to your patience on this subject. I will, however, in passing, depart from the annual custom of abusing our schools and congratulate the state of Missouri on the great improvement in this line during the last twenty years, and especially during the last ten years.

Shall I talk to you this evening on contributions to literature, art and business, by members of our profession? Such an article would be, to say the least of it, interesting to some; but would it be practical, or would it meet the object of this appointment? I am frank to say that I am proud to know that in reviewing history I find many men, eminent in our profession, who stand high in the world of literature, patriotism and business.

*Read at the Fifty-first Annual Meeting, Springfield, May 19, 1908.

The busy, active investigator or practitioner of medicine needs a rest, and a "change of work is the very best recreation." Abject idleness is repugnant and time with such a man is golden, for "he gathers pearls from all shores."

Was Dr. Oliver Wendell Holmes less a renowned anatomist, because he was a poet and essayist?

Was Dr. Benjamin Rush less one of the most eminent medical men of his day, because he was a patriot, took interest in his country's freedom, and signed the Declaration of Independence?

Is Dr. S. Weir Mitchell of to-day, less an authority on neurology, because he is poet and novelist? Such examples of medical men, participating in extraneous subjects, could be cited indefinitely. In 1897 in my annual address as president of this body, I made the following statements, which after eleven years, I see no reason for retracting: "I do not think it detracts from a man's professional usefulness for it to be known that he has a knowledge of something besides medicine. I do not think it detracts from his ability to pursue scientific investigations, for him to rest his brain, by occasionally thinking of affairs of state, literature and business. I do not believe that the medical man who confines himself to medicine, or to one branch of it, and who shuts himself in from the world, and from the consideration in moderation of its duties, is as successful a practitioner, as successful an investigator, or as successful in business, as the man who is broader in his views. I believe that the medical man who adds patriotism, literary and business qualifications to his professional life is a better doctor, a better citizen, and of more value to his locality than the recluse, who prides himself on knowing nothing of affairs.

While remarks bearing on this subject might be interesting to some, I doubt their general acceptance on an occasion of this kind, and consequently, I had to look farther for my text."

Since writing the above eleven years ago, I have noticed an increased tendency for men of our profession, to take more interest in public affairs, and I am happy to see from our daily papers, that this year some of the prominent men of this Association, including our worthy president, have been solicited and have agreed to accept positions of honor and trust, outside of medicine. This is a good omen for the profession and this commonwealth.

My work for twenty-five years, both as teacher and practitioner of medicine, has been devoted to dermatology, and having been, previous to that time, a general practitioner myself, in active country work, and knowing from experience the great importance of a knowledge of these diseases to the man in general medicine, I have selected for your consideration, for a very short time, I promise you, the relation between diseases of the skin and diseases of other organs of the body. And first, I wish to correct a most common and erroneous opinion of the profession, that diseases of the skin are more difficult to differentiate, than

are those of other organs of the body. Such a view has been held by medical men for ages, and it is not true. Why should it be so? A pathologic condition of the brain, lungs, liver, kidneys, and many other organs of the body, must be determined largely by symptoms, which are ofttimes most obscure, and, to say the least, by the most scientific and painstaking investigations leave occasionally a doubt as to the real character of the trouble, while in diseases of the skin the eruption is seen and felt, its nature easily noted, and changes in its appearance from day to day observed. Dermatologist or general practitioner can see the nature of the eruption, whether or not it is an inflammation, an hypertrophy, an atrophy, a new growth, etc., etc., though he may not be able to give it a name, and the lesions of no organ of the body are so easily applicable for microscopic study for finer differentiation. The man examining a skin eruption, certainly has advantages for a correct opinion by sight and touch, that the internal medicine men and surgeons have not. Then again, since the time of Hebra of Vienna, there has been a fairly good classification of skin diseases upon largely a pathologic basis, and this assists very much in diagnosis.

No, the trouble has been that the man preparing himself for medicine has neglected skin diseases because he considered them of so little importance and accompanied, as a rule, by no serious consequences to his patient. And yet, you general practitioners here this evening know too well that you feel every day the need of a knowledge of diseases of the skin to an extent greater than that of any of the other specialties. Some one has jokingly said, that dermatology embraces not only diseases of the skin, but all that the skin contains. I hope to show that there is more truth than fiction in that expression, especially in so far as etiology and therapy are concerned.

Specialists are accused of taking a narrow view of medicine and making everything conform to their work, and I am fearful it is too often true; but I believe the dermatologist, more than anyone else, realizes the close relation between his work and general medicine, and the great importance of his having an intimate knowledge of the latter. And as said above, as the changes on the skin can be seen and felt, there is no reason why the well versed general pathologist cannot recognize the skin changes, and while a name for it is most assuredly advisable, it is of far more importance to see and know what the change is, without a name, than to stumble on to a name without recognizing the change. I am happy to state that the medical students of to-day are appreciating the importance of this branch of medicine, in conjunction with their general work, and seem to take an interest in it not known when I was a student at college. The intimate anatomical connection between this organ and all other organs of the body is such, and the etiologic bearing of the one to the other is so close, that the thorough internal medicine man, who has a fair knowledge of diseases of the skin, is a better dermatologic therapeutist, than the most scientific skin

specialist who knows very little, if anything, of internal medicine. The skin is simply the envelope in which we are, and after it has surrounded the body as the external integument, enters it at the various openings and then becomes the mucous membrane or internal integument.

That my dermatological colleagues may not think I am making light of the importance of skin diseases as a special study, let me say I am fully convinced that dermatology is nearer a science than any other branch of medicine. It is a great and distinct study per se, but that changes in the skin structure depend largely upon its relation to distant and internal organs there can be no doubt. It is one of the largest organs of the body and of great value in the economy. Its structure is complex, and it has more distinct functions than any one organ. Thus, the skin is a special study, a most beautiful one, and easy of investigation, owing to its situation. It contains most all the elements found in other organs, as nerves, blood vessels, lymphatics, muscles, etc., etc., and these are subject to the same pathologic changes they would be, if situated some where else. The accuracy with which changes in the skin lesions can be studied from day to day, is very advantageous to the pathologist. The dermatologist can study in his laboratory, the peculiarities of the papule, the vesicle, the pustule, the tubercle, with his microscope; he can make cultures and produce the same disease in animals by inoculating them with the vaccine obtained, and thus get a minute insight into the abnormal condition; but if his knowledge of the cutaneous disease ceases at this point he is lost as far as therapy is concerned. In short, the relation between the skin manifestation and pathologic conditions affecting distant organs is so close that he must recognize that connection if he expects successfully to combat the disease and not simply palliate it by local application. The exceptions, of course, are principally the parasitic diseases, which are comparatively rare. The well grounded man, then, in general medicine, while he cannot be a general specialist, can by proper application become qualified to manage the majority of skin diseases.

To illustrate, food in the alimentary canal may undergo a fermentation and the toxins there formed, by autoinfection, manifest on the skin the various erythemas. What matters it practically to you what that particular erythema may be named, and who is more qualified than the thorough general practitioner, with a fair knowledge of skin diseases, to ferret out the cause and apply the proper remedy.

Again, that most annoying disease, eczema, which confronts all of us daily, cannot be managed simply from its name, but each individual case must be treated with reference to its own cause and character. The causes of eczema are numerous, from a simple local irritation to an organic or functional affection of most any organ of the body. Who is more competent than the well grounded general practitioner, with a good insight into skin diseases, to work out the causes in such cases and suggest a scientific, radical treatment.

I insist then, as skin diseases are so inseparably connected with diseases of other parts of the body, that the general practitioner owes it to himself and his patients that he cultivate this specialty. Of all the special branches it is one of the youngest and the least studied by the general medical man. Up to about sixty years ago it was not distinctly demarked from medicine in general, but about that time the elder Hebra of Vienna advanced it as a distinct study and he became known as the father of modern dermatology. Vienna for years was the headquarters for dermatological teaching, but in time the other noted medical centers of Europe became prominent in this line. Only comparatively recently has America taken a position alongside of European centers in the investigations in this branch of medicine. To-day we can boast, however, of a number of men who are recognized as authority the world over. But especially was I proud of my own state and city, and this Association, when the late eminent dermatologist Lassar, told me personally in Berlin, not long since, that one of the few men in America who had helped to make American dermatology what it is was Dr. W. A. Hardaway of St. Louis.

If these disconnected remarks will be the cause of the men now practicing medicine impressing upon their students the importance of a knowledge of diseases of the skin in their general work, I will feel fully repaid for my feeble efforts on this occasion.

THE SPHERE OF MODERN SURGERY IN THE RELIEF OF STOMACH DISORDERS.*

Oration on Surgery.

BY HERMAN E. PEARSE, M. D., KANSAS CITY, MO.

It is of the greatest importance that further light be thrown upon the treatment and relief of stomach pain, and of chronic vomiting, and of the various types of indigestion and so-called dyspepsia. The activity of research along this line at this time renders it timely that this section of our Association contribute whatever it can to the condition underlying these phenomena. Well did the poet Meredith express the high order of importance to mankind of the proper preparation and presentation of food, and of correct gastric and intestinal digestion, when he exclaimed:

"O hour of all hours, the most bless'd upon earth,
Blessed hour of our dinner!
The land of his birth;
The face of his first love; the bills that he owes;
The twaddle of friends and the venom of foes;
The sermon he heard when to church he last went;
The money he borrow'd, the money he spent;—
All of these things, a man, I believe, may forget,
And not be the worse for forgetting; but yet
Never, never, oh never! earth's luckiest sinner
Hath unpunish'd forgotten the hour of his dinner!
Indigestion, that conscience of every bad stomach,
Shall relentlessly gnaw and pursue him with some ache
Or some pain; and trouble, remorseless, his best ease,
As the Furies once troubled the sleep of Orestes.
We may live without poetry, music and art,
We may live without conscience, and live without heart;
We may live without friends; we may live without books;
But civilized man cannot live without cooks.
He may live without books,—what is knowledge but grieving?
He may live without hope,—what is hope but deceiving?
He may live without love,—what is passion but pining?
But where is the man that can live without dining?"

We have made enormous advances in the science and economics of life but the fundamental principles are still the same—the male human brings to the home food in the rough, the female human prepares it for the nutrition of both. Lack of efficiency on the part of either is productive of discomfort, discontent, failure of happy home life. These facts are traditional and fundamental and universally true. How pathetic then to the physician to see the man or woman who has fulfilled the primitive conditions,—has prepared for the home the food required to sustain life, and has, perhaps, added all the refinements that go to complete the surroundings of the modern civilized family—how pathetic, I say, is it when the eating of that food required to sus-

*Read at the Fifty-first Annual Meeting, Springfield, May, 1908.

tain life brings, not pleasure and contented satisfaction, but discomfort and pain, and that pain without relief or end. The pangs of hunger are truly terrible and to relieve them man will strive to the uttermost bounds of his strength, but when the poor victim must receive this food into a stomach afflicted with ulcer or dilation, to the pangs of hunger are added the torment of pain; grinding, stabbing pain that persists, in spite of efforts to relieve it, until the food substance is passed, sour and irritating, into a rebellious intestine, or rejected by vomiting. How sad is the lot of such a one, condemned to waste slowly under the horrors of malnutrition until the ulcer heals or death ends the wearying cycles of eating; and trying to live, followed by hurting and paining, and wishing to die. Well did the great thinker and preacher, Henry Ward Beecher, affirm that a man could hardly be a Christian for more than a few hours at a time if he had dyspepsia. Few there are I fear who would care to try.

The functions of the stomach are said to be, first, motor, and second, secretory. The former is so much the more important that we can practically disregard the latter. The ills that mankind suffer from indigestion of food arise from the stasis of the contents of the stomach. The stomach in such cases retains the food until the process of fermentation, or even putrefaction, sets up,—retains it thus, instead of passing it quickly and regularly into the intestines, in proper amounts and of a proper consistency, for solvent action by the intestinal juices. We have come to know that the most important function of the stomach is, storage,—to receive the food at such time as the individual can procure and masticate it, and to pass it on to the bowel at such a rate that the intestines can digest it. Stomach digestion can be largely dispensed with if intestinal digestion be perfect, as is demonstrated in the persons whose stomachs have been removed for disease or in gastroenterostomy when the operation has been performed near the cardia.

Now comes the time in this address to make clear the symptoms, and the order of their appearance, in these lesions that produce stasis of stomach contents and painful stomach symptoms by their presence, *i. e.:* 1. Ulcer of the stomach. 2. Ulcer of the duodenum. 3. Cancer. 4. Cicatrix or scar from ulcer. It is in these conditions that surgical interference saves life and cures the patient. It is here our most valuable work can be done. The first symptom to arrest attention of the clinician is

Pain. The pain of ulcer is characterized by its persistence. It is usually sharply localized, and tends to "run through" the patient and appear at the back under the eleventh or twelfth rib at the left of the spine. The pain comes suddenly, but once present it persists, with more or less variation, until the ulcer heals or is removed. It may be caused by food, may appear just as the food is taken or in one, two, three hours, according to the location of the ulcer. But the point of value is that it always makes its appearance at the same relative time under the

same conditions. The pain of ulcer of the stomach and the duodenum are alike in this respect, they persist until food has passed beyond the ulcer, or been rejected by vomiting and the stomach walls are at rest. The pain of ulcer is the factor that drives the patient to ruin. It is probable that most cases of dyspepsia associated with "neuralgia of the stomach" are cases of gastric ulcer of a chronic type, that need the light of an exploratory operation to bring to view their true character.

Acidity. Next we have acidity. The acidity that accompanies these cases is marked, and manifested by the full gnawing pain or by pyrosis belching and vomiting. It is of value to ascertain the nature of the acid that causes the acidity, as lactic acid is present in cancer, butyric acid is produced by prolonged fermentation from benign stenosis, while the cases of ulcer are characterized by the excessive secretion of hydrochloric acid by the stomach cells themselves. This excessive flow of hydrochloric acid may not be present and all hydrochloric acid may be absent from a stomach that is afflicted with ulcer, so that it is not a positive sign. The normal acidity of the gastric contents one and one-half hours after meals, is one and one-half to two parts to the thousand. In ulcer cases it often reaches three and one-half to four parts per thousand, and then becomes a serious irritant to the nerves of the stomach walls and to the intestine below it, if it ever reaches the intestine. While an accompaniment of ulcer it may be a cause of it. Given hyperchlorhydria, with the above given symptoms of pain and with blood, either evident or occult, and the diagnosis of ulcer may be said to be established. The nausea is not typical but may go on to vomiting, when the sour irritating mass is expelled. If the ulcer causes no obstruction to the pylorus vomiting is rare.

Hemorrhage may appear in the vomited material, or in the passages from the bowels, and varies in quantity from a microscopical amount to a fatal bleeding. It is present in fully one-half the cases, and results from an erosion of the epithelial and protective coverings of the vascular area of the stomach. When there are but a few drops of blood lost each day, the bleeding is said to be occult and can be found by microscopic examination or by the rules of Weber's test. If the erosion reach the walls of a vessel of larger size, the consequences may be more serious. Hemorrhage from such a source is sudden and severe, often fatal in a few hours or days. If not too large a vessel is opened the sudden bleeding may be checked by a good quantity of very hot water—115 to 120 degrees—best given through the stomach tube, and after removal repeated again and again.

Stagnation of the contents of the stomach occurs: First, when the pyloric orifice closes in a spasm; second, when it is mechanically interfered with. The first condition is caused by the presence of food over a sore area in the stomach, or by such reflex spasm as may be set up by a sore area anywhere along the line of the intestinal tube. This will be taken up more fully in following paragraphs.

It is this condition that gives rise to the greater part of the symptoms of which dyspeptics complain, and we should be patient, persistent and accurate in sifting down the cause of stagnation when a patient complains of fullness after taking food, of pain and gastric distress after a meal, and when we find that the stomach is not empty in five to seven hours after a full, hearty meal of mixed food.

Upon these four points we make our diagnosis: Pain and tenderness, acidity, hemorrhage, nausea and evidence of stasis. All being present, the patient surely has ulcer; and one being present he may have ulcer.

Ulcer may not be possible of diagnosis. Cancer in its incipiency never is possible of diagnosis except by exploratory incision and direct inspection.

Cancer of the stomach is an insidious disease; suffice it to say that I know of no means of diagnosis that will detect early cancer in time for its removal and cure, save and except one and one only—and I offer to you this one in the earnest hope that it will be used often. When early signs of dyspepsia do not yield to a cathartic, a modified diet, and suitable medicines in a few days' time; when the dyspepsia threatens to become a chronic one, place your patient upon the operating table in the hands of a competent surgeon for diagnostic or exploratory laparotomy. If cancer be developing, this is the only time and the only way within the knowledge of medicine to-day, that the cancer can be attacked with hope of cure. A few months, and all operative procedures are for relief only, and the day of cure has fled forever.

Dr. Joseph C. Bloodgood, of Baltimore, was selected by the editors of the *"International Clinics"* to write upon the world's progress in surgery. Hear now, what this careful observer writes in 1908 as the present position of the medical and surgical world in the diagnosis of cancer of the stomach in its operative stage.

"The problem of diagnosis still offers much for investigation. At the present time is seems impossible, except in a general way, to select the smaller group for which surgical intervention is indicated. The majority of patients suffering with so-called gastric symptoms have no organic lesion. The symptoms are usually due to disturbance of the nervous mechanism and are part of the complex picture of some form of a neurosis. In others, the symptoms referred to the stomach are due to organic lesions of viscera near, or remote from, the stomach; for example, cardiac, nephritic and hepatic. In some organic lesions of the stomach, for example, simple or acute gastric ulcer, medical treatment should first be employed. In carcinoma early operation with complete excision is the only hope. In pyloric obstruction surgery is the only means of treatment.

Now that we know so much about what surgical intervention can do, and now that we have established a technique with a mortality which hardly needs consideration in the decision as to operation, the question is, how to select the cases. From my own experience and from a very careful study of the literature, I cannot but conclude that at the present time we must acknowledge with our medical colleagues, or perhaps force

them to acknowledge with us, that exploratory laparotomy is the only accurate method.

Cancer of the stomach has been cured, but the relative number of cases is small. In every patient at the cancer age, with gastric symptoms, the possibility of a malignant lesion should first receive attention and, unless this can be absolutely excluded, the stomach be inspected. In the operable stage, with few exceptions, cancer of the stomach exhibits no differential signs."*

Surgery has done much during the last ten years to relieve gastric insufficiency. The internist has so few opportunities for observing the actual condition antemortem that he has been outstripped by the surgeon, who sees the conditions in the living patient upon the operating table when he opens the abdomen, when he inspects the stomach and the region lying about the pyloric opening, and sees for himself what is needed and what may be done for relief. As the surgical achievements in gynecology have given us the pathology of uterine and ovarian disease, so is surgical operative work in the upper abdomen giving us a sure foundation for the study and treatment of gastric disease. The operation is often exploratory and, when so, is devoid of danger. May I repeat this, for it is here the greatest value to the profession must come in the next few years—from the exploratory examination—when the physician having in hand the case history and results of medical treatment, joins hands with the surgeon and, without risk to the patient, clears up the diagnosis and makes comparatively certain the cure of the case, when cure is possible, either by medicine or surgery as the conditions indicate. Exploratory opening of the abdomen is without danger. The certainty of diagnosis and consequent directness of treatment richly repays the patient for the discomfort of the exploration. Upon observing a series of such exploratory operations the physician gains a new impetus in the study of painful stomach affections and a clearer insight into the needs of the case.

While it is undoubtedly true that there are psychical, or so-called nervous or neurotic, conditions in which a stomach of normal structure fails of its function, by reason only of lack of correct nerve control, and while a majority of the patients suffering from stomach symptoms have no organic lesion, it is not the less true that many cases of stomach pain and indigestion and nausea and vomiting and failure of function, that have neither ulcer or cancer nor scar tissue as a basis for their existence, have a cause that may be seen and felt and studied and removed and by surgical operation the patient cured. They may have adhesions from perforation, or from inflammations of the peritoneum over the gall bladder and the under surface of the liver; or they suffer directly from the inhibition of an inflamed appendix.

Let me here call attention to the anatomical arrangement of innervation that obtains in the stomach and intestines. I hope by this means to make clear how an inflamed appendix, or an ulcerated colon,

*International Clinic, Vol. I, page 283.

or a gall bladder irritated by calculi, may cause such an inhibitive influence as to block the passage of food from the stomach at the proper time. In the development of the fetus there is one bud for the foregut, one for the midgut and one for the hindgut. Each of these centers of development carries forward its nerve supply in its growth and development, the consequence being that reflex conditions are established in the stomach when inflammation exists in the appendix, the liver, the gall bladder, or ducts, or in the pancreas. Trouble in any of these locations is apt to be followed by spasmodic closure of the pylorus and the symptoms of pyloric stenosis or pyloric insufficiency follow. If the operation of gastrotomy is done the operator is surprised to find a normal stomach; he must look further for the cause of the condition, and it is more than likely that he will find a spasmodic closure of the pylorus from irritative or inflammatory lesions in the appendages to the digestive apparatus, among which chronic appendicitis holds an important place.

In the *Annals of Surgery* of July, 1907, appears an article by Dr. William J. Mayo that stands without equal for brevity and completeness, and I cannot do otherwise than to quote a few lines from this classic production and recommend its entire study to any one interested. He tells us that the foregut gives by its development during growth the "posterior wall of the pharynx, the whole of the esophagus, the stomach (and duodenum to a point just below the common duct, the liver and pancreas being off-shoots from that part of the foregut which is to become the upper duodenum. All of these organs are concerned in the preparation of food for absorption but do not themselves absorb. Looked at from this standpoint, we have the explanation why the first four inches of the duodenum is associated, both in its physiology and pathology, with the stomach. The duodenum below the common duct, the jejunum, ileum, cecum, and the colon to the middle of the transverse if not to splenic flexure, is derived from the midgut and is concerned in absorption.

Kolling, Cannon and others have demonstrated beyond a doubt that the control of the pyloric apparatus is largely vested in the duodenum. We have reason to believe that to a certain extent this control can be exercised by all of the just named derivations of the midgut."

Dr. Mayo in making this assertion is well sustained by clinical evidence. In fact, the statement is founded upon a most extensive clinical experience, as we all know. We can thus readily understand that if the duodenum, the liver, the entire small intestines, the appendix and a part at least of the colon, can inhibit and control the pyloric outlet of the stomach, disease in any one of them may cause such an array of gastric symptoms that the stomach may appear to be the storm center and the real cause,—cholecystitis or an appendicitis be overlooked until found by exploratory incision. Thus it is quite common in hospital practice to find cases of chronic dyspepsia with vomiting cured entirely by an operation upon the appendix. A few years ago a very prominent sur-

geon of Kansas City died from prolonged vomiting and inanition after a year's illness, and autopsy showed a gall bladder irritated by an accumulated mass of gall stones, the presence of which was never even suspected by his attending physicians.

Speaking of this same condition Dr. Mayo says, in the article referred to, "we have seen most marked pyloric spasm giving definite signs and symptoms of supposed mucous ulcer, and upon exploration have found gallstones, or appendicitis, or tuberculosis of the cecum. On all of these occasions the real seat of the disease was obscured by the stomach symptoms occasioned by the irregular pylorospasm. These experiences have been so numerous that we look upon pyloric spasm as an indication of an irritation in some part of the intestinal canal which causes an irregular attempt to close the pylorus and thus prevent food from entering the disturbed area. It can be aptly compared to the miner's sluice canal, the sluice gate being controlled by a pulley. Upon necessity for canal repairs the gate is closed, the disturbance appears at the top where the water is prevented from entering the canal."

So here we have two great classes of disorders of the digestive function, both curable by surgical operation. The one an array of diseases of the gastric structure itself, the other reflected, so to speak, from other organs. Of the gastric neuroses, so-called, I shall not speak further than to say that operation should cease when it finds a normal abdomen insofar as its visible anatomy is concerned. The elusive types of disease that are founded on changes in the central nervous system must be treated by attention to that center and, so far as the author of this article knows, surgery offers assistance in this condition only by accurately determining it by exploratory incision. Once the condition is established, the patient's mind is duly impressed and the case usually progresses to a cure in the hands of the physician. I therefore commend the person to the general practitioner to whose kind attention these few pages are directed and in whose good judgment and honest purpose and ability I have the deepest trust.

The ulcer cases should be attacked surgically, either by excision or by a gastroenterostomy, according to the case.

The cicatricial contractions should be attacked and cured surgically by pyloroplasty or by a gastroenterostomy.

The duodenal ulcers should be attacked and cured surgically by gastroenterostomy or by excision, according to location.

The cancer cases should be attacked surgically and the diseased area removed, if possible to hope for a cure; if such is impossible, from the great advance made by the disease, a gastroenterostomy relieves pain and prolongs life.

This completes the list of purely gastric or "direct" conditions. As to the reflex causes of symptoms quite similar, we should excise the inflamed appendices, remove the gall stones, excise the bowel ulcers, and relieve the adhesions, and give the benefit to our patients of surgical skill and lessen the number of chronic dyspeptics that now haunt our medical brethren. Up to the margin of neuroses the field is surgical and the responsibilities are ours.

STRICTURE OF THE ŒSOPHAGUS.*

BY C. E. FULTON, M. D., SPRINGFIELD, MO.

Cicatricial stricture of the œsophagus of such degree as to interfere with swallowing may not invariably follow every minor lesion of this canal, but when it does occur it is the result of an ulceration involving the mucous membrane and submucous tissues. Its etiology therefore resolves itself into the etiology of ulceration of the œsophagus.

The ingestion of escharotics, purposely or accidentally, is the cause of nearly all cases. The constantly increasing number of reports of cases of ulceration of the œsophagus occurring in typhoid fever makes it a factor to be taken into account. Four years ago Dr. Thompson, Professor of Surgery in the University of Texas, published a review of nine cases from this cause, which were all he had been able to find reported in medical literature. To these he added reports of three cases that had come under his own observation. I do not know how thoroughly he had searched the literature, but since that time several cases have been reported in the same periodical in which his paper was published (*Annals of Surgery,* May, 1904). Although this is a rare sequel of typhoid, the fact of its occurrence needs emphasizing, and for that reason, I will, at the close of this paper, report the only case of the kind that I have seen.

When one takes into account the comparative frequency of sores on other mucous membranes, and the exposed position of the œsophagus, he cannot help wondering that it is not more frequently the seat of lesions.

It does not appear that the swallowing of hot fluids or solids often leads to the development of stricture, and yet food is sometimes swallowed for the very reason that it is too hot to hold in the mouth, and in the presence of others it would be embarrassing to eject it. The gullet, moving it slowly as it does, must undoubtedly suffer greatly from the effects of heat. Likewise must it suffer from the first contact with the many "hot and rebellious liquors," the escharotic properties of which it to some extent neutralizes before they reach the stomach.

The symptoms of stricture are few and point unerringly to its presence. They are dysphagia with emaciation and debility, varying with the completeness of the obstruction. Regurgitation of food, or fluid of alkaline reaction, occurs at once if the obstruction is high up; in three or four hours if it is low down, and the œsophagus above the stricture is dilated. (Butler.) Auscultation to determine the presence and locality of the stricture may be practiced, but is of little use as compared with the positive knowledge gained by the use of the olive tipped bougie.

While it is not difficult from the symptoms and soundings to de-

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*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

termine the presence of stenosis, treatment cannot be begun until its cause is known. In spasmodic stricture the bougie will only be momentarily arrested in its passage, and usually once passing it relieves the symptoms permanently.

Cancer of the œsophagus causing obstruction can be inferred from the excessive pain, the age of the patient usually over forty, and the absence of a history of anything that would have caused ulceration.

Pressure stricture is to be eliminated by careful examination for thoracic aneurism, or any tumor or abscess in the course of the œsophagus.

Stricture from gumma should be thought of and the history relative to syphilis carefully inquired into, and if good reason for it is found, specific treatment should be instituted.

The cicatricial stricture can be diagnosed with reasonable certainty from the history alone.

The modes of treatment that have been, or are now being used, are very similar to those of treating urethral stricture, viz., gradual dilatation, divulsion and division; sometimes singly, sometimes combined. As in the urethra, gradual dilatation, where applicable, is to be preferred. This is best accomplished with conical pointed bougies. Bulbous sounds are of little use except for diagnosis. It is almost impossible to cause a bulb to lie in the grasp of a small stricture. It may be brought without difficulty to the proximal margin, and may be pushed to the distal side, but is only with great difficulty held in the contracted segment. It is not easy to secure with them the absorption produced by continued, gentle pressure. (Eastman.)

The beginning of treatment by gradual dilatation of strictures of very small caliber is carried out by the passage of specially constructed filiform bougies; and in the hands of an expert is often successful, but the difficulties must necessarily be much greater than in urethral stricture.

Divulsion is not in favor with the majority of authorities, but is strongly advocated by an Italian surgeon in cases where a filiform is passed with great difficulty. He has devised an instrument, something on the principle of the Otis dilating urethrotome, which is attached to a filiform and made to follow it through the stricture when it is opened by turning a screw and sufficient divulsion made to allow of gradual dilatation afterwards with ordinary œsophageal sounds. (Allesandri.)

Division of strictures by any of the œsophagotomes in use, either direct or retrograde, is considered dangerous by many. Very few speak highly of its results.

The treatment by tubage as advocated by Symonds is more applicable to cancerous strictures as a palliative measure. The relief of impassable strictures by gastrostomy, and the treatment by retrograde dilatation, and the string method of Abbe, will be referred to in the following case which I will now report:

A farmer's son, sixteen years of age, was stricken with typhoid in July, 1906, from which, after a severe illness, he recovered in September.

During this sickness he complained of a great deal of pain under the sternum. When he had so far recovered as to begin to take solid food, he found such difficulty in swallowing that he was obliged to remain on liquid or semi-solid diet. This dysphagia increased rapidly in severity until it reached the point, in October or November, that at intervals, he could not even swallow fluids. Consultation was called after the family doctor failed to introduce a catheter and numerous unsuccessful attempts were made to pass sounds, from filiform size up. In fact this treatment of trying and failing to pass instruments was kept up regularly every day from about the middle of November to the fifteenth day of December. During this time the boy succeeded in swallowing enough milk, by keeping constantly at it, to keep him alive, but he became very weak and emaciated, and on the last date mentioned, he again failed to swallow any liquids.

Operative interference, which had been declined three weeks before, was now accepted, as it too often is, as a last resort. On December 17th I was called to treat him, and on December 18th performed gastrostomy for the purpose of introducing food into the stomach and with a hope of being able to dilate the stricture from below when the patient gained sufficient strength to bear it. For ten days he was nourished through the gastric opening and gained considerable strength, and by that time he began swallowing small quantities of water. He was then given a shotted thread to swallow, but the shot, a number six, stopped at the stricture. More thread was "played out," so to speak, and in a few hours he announced that he could feel that it had gone down through the stricture. His stomach was filled with normal salt solution; he was raised to a sitting posture, and with the escape of the fluid, a loop of the thread came out the fistula. A larger thread was attached to the mouth end of this one, and drawn through, and to this a large braided silk cord was attached and drawn down and through in a similar manner, to be used as a guide to future attempts at dilating.

The stricture was found to be an annular one nine inches from the incisor teeth. Small rubber tubing was attached and drawn upward through the stricture after the manner advised by Ochsner and left from two to four hours at a time.

After three days of this treatment, a No. 23 F. bougie was drawn down tightly into the stricture, and Abbe's string-saw used until the bougie was drawn entirely through. Two days later a No. 28 F. bougie was used and the string applied in the same way; the bougie being drawn down and out through the stomach wound. This was done without a general anesthetic, and he suffered severely from shock for a few hours after it. If I were to do it again I should use chloroform.

After this the 28 F. bougie was used in the ordinary way, once daily, with intention of increasing the size every third or fourth day, and he was eating and swallowing all kinds of food, after special preparation, such as mincing of meats and vegetables.

On the evening of the seventh of January he became afflicted with an acute delirium or mania. He thought he was going to be burned alive, and wanted to get away from the hospital. This became so violent that the guide string was removed for fear he would get hold of it and injure himself by hard pulling. The bougie was passed in the usual manner every day, but as his violence increased this became so difficult and caused him to make such desperate struggles that I yielded to the importunities of his parents to let the stricture alone till his reason was restored. I made a mistake in not replacing the guide string and keeping his hands tied if his parents would have allowed it.

After three weeks it was thought that he was in a sufficiently composed state of mind to allow bougies to be passed, but by that time he was swallowing with great difficulty, and I could not succeed in passing even a filiform. He was persuaded to attempt to swallow another shotted thread, but not succeeding quickly he grew stubborn and refused further coöperation in the treatment. Fearing his mental state would again become unbalanced if force were resorted to, I allowed him to go home provided with means of feeding through the gastric fistula.

He has lived ever since on milk and eggs; has regained his normal weight and reason; is apparently well and strong. He will not consent to any attempt to dilate the stricture from below, nor will he consider any advice as to a variation in diet. He says "he is doing well on milk and eggs and is content to let well enough alone."

Barring errors that are easier seen in retrospect than in prospect, I consider the principles guiding the treatment of this case to be the best we have for impassable stricture. I recognize the difficulty of defining impassable stricture. It would require as many shades of meaning as there are degrees of skill inherent in different doctors.

From the individual standpoint one might say that an impassable stricture is one that is impassable for him after using a fair degree of patience and not more time than a rapidly starving patient can afford to lose. Then, if he fails, he should either turn the patient over to some one who he thinks will be more likely to succeed, or perform gastrostomy and nourish the patient through the artificial mouth till the stricture can be relieved.

DISCUSSION.

Dr. William A. Shelton, Kansas City: Those who have had experience with stenosis of the œsophagus realize the difficulties of the treatment of this condition, and we ought to congratulate the doctor even if his patient did not take his advice. He took this patient in an extreme condition, and succeeded in passing something and in nourishing him and bringing him back to a normal condition. In these cases, where it seems impossible to pass a bougie or anything,—a shot, or a string from above,—it may often be passed from below. This was shown by Abbe, and has been done by many others who have written on the subject.

Dr. John D. Seba, Bland: Stenosis of the œsophagus is a very difficult condition to deal with, and what to do and what not to do is a very important question. As the doctor who has preceded me said, very often when they cannot pass anything from above, they can from below. All my experience has been with young patients, and I find that it is well to tell the parents that we might have to operate. The patient in this case went without operation for three weeks, which is too long. We should always have our resources at our command and be able to tell them what we can do.

Dr. J. D. Griffith, Kansas City: My trouble with these cases has been that they generally come to me with a dilatation, and a bag just above the stricture. In that condition I have found the most trouble. In most of my cases I have failed to get a satisfactory result. When they come early, the results are better. As the doctor who has just spoken says, it is well for the physician to announce that it may become necessary to operate. These are the most difficult cases that the surgeons have to deal with.

Dr. R. M. Funkhouser, St. Louis: I have had some experience in these cases, and, as has been said, the difficulty very frequently is with the bag. There are some cases that seem to bear out the theory that the scar in time will relax. In those cases it is fortunate for the patient. In one case I remember, the patient was in desperate straits, but later on the passage of bougies was followed by an improvement, but in the meantime the condition was very serious.

Dr. Jesse S. Myer, St. Louis: I have had occasion in the past few years to observe a number of cases of obstruction of the œsophagus, but none exactly resembling the one described. I think these cases belong to the surgeon. However, we often meet cases of stenosis of the œsophagus that have not reached the stage described. The important thing to be determined in these cases of obstruction of the œsophagus is the character of the obstruction, whether due to malignancy, or a spastic condition. I do not agree with the doctor that all strictures are due to a previous ulceration. The œsophagoscope, which was not mentioned by the essayist, enables one to make an early diagnosis as to the character of the obstruction. I have been employing in benign strictures of late an ingenious dilator devised by Prof. Straus, of Berlin, which produces dilation by hydraulic pressure. It dilates to any size you want to use, depending upon the amount of pressure employed. This necessitates an opening in the first place, large enough to admit a No. 22 bougie. This would be practically impossible in a case such as Dr. Fulton has described.

Dr. Fulton, in closing: There are a few very interesting points in connection with this case which are not very thoroughly brought out in my paper. In regard to passing an instrument from below, I will say that that was not attempted at the time of doing the gastrotomy for the reason that it was thought best to give the patient a chance to gain some

strength, and after he got strong enough, what frequently occurs in these cases occurred in this case; that is, having been given a rest for ten days, although previously he had not gotten any fluid passed it, the œsophagus opened enough, of its own accord so that fluid began to go through. It was at this time that he was given the thread, which he succeeded in swallowing. I had not then heard of many of the methods of passing instruments that I have heard of since, and especially the rubber bag, suggested by Dr. Myer. The passing of an instrument in such cases as this depends largely upon the skill of the man attempting to pass it. The work should be done only by an expert, and, unless you can place the patient in the hands of an expert you had better go ahead and do a gastrostomy. Why this should be such a bug-bear, I cannot understand. It is so easy that anyone can do it who can do a simple laparotomy.

UNCLASSIFIED CONCLUSIONS IN OTO-LARYNGOLOGY.*

BY FAYETTE C. EWING, M. D., ST. LOUIS, MO.

In this paper I shall endeavor to express some of the positive conclusions that have come to me in my practice of oto-laryngology, selected with little regard for their consecutiveness or bearing upon one another. I have often wondered why the men who write books hazard so few positive opinions; they seem to be satisfied to compile, and quote, and instead of telling what remedy is best for this or that disease, or what two or three are best, they find it incumbent upon them to enumerate the many that have found favor in the eyes of other authorities, leaving the inexperienced, the very ones who need guidance, to tentatively follow their own judgment.

When a practitioner writes a book, he places himself in the light of an authority, and an authority should not be afraid of the personal equation. In the humble place of essayist, I shall seek to gain your attention by the positive pole of the battery.

Usual Therapy of the Mucous Membrane too Irritating: I have become convinced that the usual treatment of the acutely inflamed Schneiderian mucous membrane is too irritant. In the olden days of medical education,—and not so very long ago either, since it was when I was at college,—when students were crammed through a two years' course, certain formulæ were used to convey in a nutshell, more complicated ideas. One, I learned, to express the treatment of inflammation was *"rest, elevation, relaxation."* These principles hold good to-day, and likely ever will. Though the Schneiderian mucous membrane cannot be elevated, the intent of elevation may be applied by our not increasing its blood supply; and by certain other methods, we may hope to rest and relax it. It is rested by anything that will protect it from irritation, it is elevated as we may be able to reduce its blood supply, it is relaxed according to the extent of passivity that we may preserve. We would not prod a sore place *on* the body, why should we prod one *in* it?

Spray Pressure as an Irritant. The pressure exerted by the ordinary spray-apparatus is so forceful that it is a mechanical irritant. A proper equipment requires an eighty to one hundred gallon storage-tank for compressed air, and an hydraulic pump with which to fill it. In the small ten to twenty gallon tank, commonly in use among specialists, a pressure of twenty-five to thirty pounds is demanded to obviate the necessity of pumping up after one or two patients are treated.

As for the little pump-gun shooters of spray, such as the patented portable tanks, wall-attachments, and foot-receptacles commonly employed by general practitioners, which exhaust their supply of air with one or two squirts, the pressure from them is so strong that I can only classify them as a menace, a source of positive evil.

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*Read before the Oto-Laryngological Section of the St. Louis Medical Society, February 26, 1908.

A spray pressure over ten pounds is a mechanical irritant and will frequently evoke sneezing. With a large tank, a pressure of seven pounds is sufficient, the sensation of which is barely perceptible, and a half dozen or more patients may be treated without appreciable effect upon the pressure. By not adding a mechanical irritant to our medicament, we are, passively, at least, conforming to two rules of our axiom, —rest and relaxation.

Drugs as Irritants. With the idea of avoidance of irritants, we naturally turn from all drugs which tend to increase vascular tension. We should soothe the acutely inflamed hypersensitive membrane, and drugs have a really small part in our local therapy. Eucalyptol, (suspended in plain yellow vaseline) is almost my sole reliance in such conditions. Often, I use the vaseline alone, when there is excess of inflammation.

Menthol an Irritant. Menthol, the base of most coryza sprays, is a much over-rated remedy in rhinology. I am convinced that it is an irritant, and I have discarded it entirely in acute inflammations of the anterior nares, although I sometimes add it to the post-nasal spray, a much less sensitive surface. My confrere, Dr. F. M. Rumbold, once said to me, "When you turn a patient out of your office feeling worse than when he came in, you have done harm." I believe it. So I take as my guides to the strength of my application to the nares, sneezing, burning, and the watery conjunctiva. An application that excites any of these positively, opposes the principle of rest, elevation and relaxation, for it irritates, and increases the blood supply. Whatever we do, our patient must depart with a sense of comfort and good feeling, and if our treatment fails of this, better by far that we do nothing.

When I was a student at a certain hospital in New York devoted to the treatment of diseases of the nose, throat and ear, I was taught to make iodo-glycerine applications to the anterior nares with a cotton swab applicator. The patients frequently went out with tears and burning, and, in the light of a larger knowledge, I do not doubt, were more harmed than helped. If menthol is used at all in acute nasal inflammation, it should never be applied strong enough to excite any of the three evidences of irritation. My own experience tends to the belief that many noses are so sensitive to it, that we seldom confine its effect to the pleasant, cooling sensation, and usually produce the irritation.

Adrenalin also an Irritant. In like manner, I must condense the two indiscriminate use of adrenalin chloride upon the acutely inflamed Schneiderian membrane. We know how the law of compensation interpenetrates the universe,—we see, in using drugs, that every stimulant is afterwards a depressant. Cocain contracts the arterioles, and anæsthetises the membrane, producing a delightful sensation of relief from the irritable and obstructed nares, but alas, how soon comes the awakening from our delusion. Cocain, first heralded as a panacea for hay-fever obstruction and hyperaesthesia, is now in disrepute; for

experience has taught us that by its use, our poor patient will have added one irritant cause to another. Cocain, according to the Homeopathic doctrine of *similia similibus,* should be the ideal remedy for hay-fever and coryza, since we invariably produce this pathologic condition by its repeated application to the healthy membrane. Compared with cocain, adrenalin is less potent as an anæsthetic, and more so as a vaso-constrictor, and both increase cardiac action. They differ, not in nature, but in degree. If, as admitted, we can produce an artificial coryza with cocain, why not with adrenalin? Regarding them both as nasal irritants, I employ them not at all in my routine therapy, but only when I desire some specific effect, as to secure drainage in sinus disease or operative work.

Quick Cures. The omnipresent law of compensation forbids that we should undo, in a minute, or a day, what required days or months to develop. With a sort of "get-rich-quick" therapy, some of us incline to think that we have cured or benefited a coryza, when, with adrenalin or cocain, we have shrunk a hole in the nares, never considering the aftermath of tares that we must reap. We forget that nature's laws are consistent, that she does not reverse herself, that she works under abiding conditions, as we see in the cases of mushrooms, weeds, soft and hard trees; each with varying degree of strength proportionate to the time required for its development. The length of life in all of nature's creations, apparently, is proportioned to the period of their growth; and this seems to apply in the treatment of acute and chronic diseases—the length of time required for restoration from disease to health, being proportioned to the period of growth and development.

The Inconsistency of our Catarrhal Treatment. Quick cures suggest the inconsistency of our catarrhal treatment compared with our attitude towards inflammatory conditions in other parts of the body. "Consistency is the bug bear of little minds," said Emerson, but he was not referring to our attitude toward nature's laws governing the body, which are unchangeable, inexorable. Thus our therapy is compelled to follow certain laws governing pathologic conditions. We may cure now and then empirically, but, in such cases, nature has observed her laws, only, we have "builded better than we knew." As I have said, we would not attempt to benefit an inflammation *on* the body by an irritative procedure, neither would we have much faith in applications made at intervals of days. Yet this last is just the method we pursue in our treatment of the nasal passages. If we were called to treat an inflammation on the surface of the body, we would "dress it," that we might protect it and keep our medicament in constant apposition. And, here, I think, is the snag that has made the treatment of unobstructed catarrh a reproach in the eyes of the laity, and those of the profession at large. We attempt that which common thought, and common judgment should teach us is against all experience with like conditions

elsewhere we apply an inconstant spray twice or thrice a week when twice or thrice a day would be rational. Water, the usual vehicle, does not adhere to the membrane, and the medicaments suspended therein, if at all irritant, excite a flow from the mucous glands, that either neutralizes, or washes both vehicle and base away within a few minutes. Since it is impossible to treat the respiratory tract by *fixed dressings,* then it would seem that we should adopt that application which most closely conforms to the quality of fixedness. This resolves the matter into a question of vehicles, and it necessarily follows, that that vehicle is best, which, not being irritant will be most adherent to, and protective of, the mucous membrane.

Vaseline the Best Vehicle. Vaseline, I am convinced, after observing the methods of treating catarrhal conditions in many private offices, and hospitals, in America and abroad, and in my private practice, is the best vehicle. Containing an active therapeutic principle by reasons of its petroleum origin, it is also soothing and protective, and more adherent than any other product that can be sprayed. Common yellow vaseline, melted in a Rumbold atomizer, over a Bunsen burner, and sprayed into the nose, forms a thick salve-coating, which, on the surface of the pharynx or naso-pharynx, is more adherent than any other vehicle. In the passages and crevices of the nose, it will remain for hours, undislodged, if no active effort, such as blowing, is made to remove it. Various medicaments may be suspended in it, in strength adapted to the part to be treated or the special susceptibility of the patient. The Rumbold sprays are not to be confused with the hand-ball atomizer. Heavy vaseline is not adaptable to the small atomizer as this soon becomes clogged, but, through the Rumbold apparatus, a heavy spray is sent in, which congeals at the temperature of the body, and forms a coating of protective salve, maintaining a relatively constant contact of the suspended medicament with the surface, for a varying length of time. Thus by its purely mechanical character, it is curative in that it protects the mucous membrane from cold air and dust in harmony with our idea of rest and relaxation. Here, I would make it clear that these remarks apply particularly to the nasal passages, the more sensitive surfaces, and not to the throat cavity, pharynx, or post-nasal space, which in certain chronic conditions may require active stimulation, and the application of such remedies as nitrate-silver and strong astringents, in aqueous solutions, applied with a swab.

Value of Elimination. And now having told you at some length about what to put into the system, I shall tell what I would *take out.* For, if I had to include all my treatment in one word, and confine my practice to the application of that one word, I should say: *Elimination!* I firmly believe that more good may be accomplished by elimination, than through any process of injection. If either had to be denied me in treating acute coryza, I would rather purge than apply astringents; I would rather remove ptomaines, in dyspepsia and constipation, than spray

the larynx. When we have eliminated accretions and have made it possible for the obstructed glandular system to remove its rubbish, function will be restored and nature given the chance, which she is always desiring, to help herself. Indeed until this is accomplished, I believe that local applications are worse than useless, since they involve inconvenience, expense, and possible discomfort for which the patient receives nothing. The stomach and intestines are entities that should be reckoned with in every case of acute and chronic catarrh of the nose, throat or larynx since they fan a fire that we cannot quench as long as they are diseased.

Having by disease reduced the resistance of the system, they make it susceptible to maladies, which in turn, by a like devitalizing process, encourage others. What avails it to cure a disease—if we could—when factors in its promotion remain? It would not remain cured. Until we have removed the cause, we have builded upon sand, for the membrane of larynx and pharynx being continuous, through the esophagus, with that of the stomach, excreta, and irritant gases therein, tend to promote a catarrhal condition in these organs by direct action. So it is that by both indirect and direct influence dyspepsia and constipation encourage catarrh of the upper air passages. However resourceful we may be in technic, apparatus, and local therapy, in the treatment of acute and chronic catarrhs of the respiratory tract, we are "poor indeed" if we fail in an intelligent appreciation of the influence of general conditions upon local disease.

Diathesis à Catarrhal Factor. Diathesis, should be always in mind, especially with children, in cases of chronic catarrh, whether of ear, nose or throat, when we have no evident obstructions to reckon with. Local applications in the tuberculo-scrofulous diathesis, count for little or nothing, except they be made in connection with remedies which promote organic function. Catarrh is the natural tendency in such diathesis,—consumption itself being a sort of catarrhal process with subsequent breaking down of tissue. Food, fresh air, and rest include almost our sole resources in staying the progress of tuberculosis of the lungs, and they act not directly, or locally, but through the system at large, by increasing vitality and resistance.

Reduced Resistance. In like manner, anything that reduces physical tone, promotes local disease, which often needs only a certain amount of reduced resistance to blow up a flame. It is no uncommon thing to observe typhoid incorporate itself upon a typical malaria, and pneumonia succeed an influenza. When we have such results, we cannot doubt that reduced vitality made successful a slumbering or active assailant, other than that which had already engrafted itself. Again, many times catarrh succeeds an anaemia-producing disease such as typhoid, and departs of itself with the restoration of bodily health, all of which should teach us that, as Lord Bacon, a statesman, took all learning for his province, we, as Oto-Laryngologists, dedicated to the cure of local-disease, should have knowledge of the entire human body, and, in so far as we are required consider it to achieve a local result, take *it* for *our* province.

Faulty Hygiene and Bodily Habit. And here, I might speak at length of the influence of hygiene as a factor in the promotion of physical tone and consequent cure of catarrh—a subject upon which I have most positive opinions, but it would require too much time and I shall be compelled to more generalize than particularize. As a specialist, and in a broad sense a localist, I often feel that "Othello's occupation's gone" or that he had none, when I am presented children, having no provocative obstructions, whose catarrhs are plainly the result of faulty hygiene and bodily habits; children over-fed, over-dressed, and over-excited; under-slept, under-exercised, and under-oxygenated; the hot-house plants of luxuriant city homes, the band-box babies of a degenerate, *fin-de-siecle* civilization. Children of convenience, they are, not consulted in the borning, finding very life in the flitting pleasure of parents, and living to suit their necessity for amusement. "A fig for virtue! 'tis in ourselves that we are thus, and thus," said Iago. And with such subjects, I sometimes am tempted to refuse local treatment and exclaim, "A fig for physic!" for surely 'tis in themselves that they are thus and thus, and with their parents largely lies the cure.

Parental Obligation. Until their parents are willing to give them the opportunity for physical as well as mental education, local treatment to the nose and throat will profit them little. But I solace my conscience knowing that I am justified in my local applications until I gain the confidence of the parents sufficiently to enable me to secure more lasting results, through the broad measure of hygiene. After all, results are the object of the conscientious physician, and he is bound to no dogma in the domain of cure. Every child has a moral right to be well born, and having been born, to be well-bred. And by this, I mean that men and women afflicted with marked transmissable hereditary disease and stigmata of degeneracy have no right to afflict an innocent offspring; but however born, the child has a moral right to be physically well-bred, to make the best or better of whatever natural equipments nature has bestowed. It is a solemn obligation and I have no respect for the amusement and convenience-loving parents, who sacrifice their children to their pleasure. Suburban environment may not be the ideal for physical development, but it offers many advantages over the restrictions of the city not so much in a purer air, though that is something, but in its encouragement to the out-door life, with its increased exercise, muscular development, lung expansion, and consequent activity of organic function. It was the contemplation of such benefits to my children that made me select a suburban home at possible pecuniary, and decided personal sacrifice. But whatever the circumstances of the family, parents who reside in crowded cities owe the debt of self-sacrifice, to the extent of their ability, to benefit those whom they brought "into this teeming world" before "the age of consent." Life is hard enough with health. The trite old reply to the question, "Is life worth the living?" making it "depend upon the liver," is but partly stating the case—whether life be worth the living depends upon the health of *all* the organs, and all need rational education and nature's daily food and stimulus with which to work.

449-450 Century Building.

A HISTORY OF AMPUTATIONS I HAVE DONE ABOVE THE SHOULDER JOINT.*

BY GEO. HALLEY, M. D., KANSAS CITY, MO.

The first of these amputations I have done was on a gentleman who came to me with an enlargement under the arm. This enlargement I lanced, but found that I did not open a pus cavity but had opened an osteosarcoma, beginning in the venter of the scapula pointing downward, I now recognized the fact that I had to deal with a sarcoma in the axillary space. I desisted in the operation and waited until the next day, desiring to consult the man about the propriety of doing another operation. What that would be I told him I could not tell but that I might have to amputate above the shoulder joint. The disease extended well up under the axillary space. The man asked for another day to think about the matter. He was in a very weakened condition and was afraid he could not bear the operation. I told him that there was no hope of saving his life, except by the operation, and while it was a severe one it was not fatal; that the results of the operation were usually favorable. How it would be with him I could not tell. Two days after lancing the enlargement he consented to have the shoulder amputated. This I proceeded to do in the following manner:

After anæsthetising him and putting him on his side, and with a knife beginning at the vertebral border of the scapula, I made an incision along the spine of the scapula to its acromial end. Turning the knife now I proceeded along the upper border of the clavicle, bringing it in to the inner fourth. I dissected up the integument off the tumor, and bearing the clavicle as far as was necessary to expose the whole of the scapular region and the upper border of the clavicle, I divided the sternal end of the clavicle at the junction of the inner with the outer three-fourths; I then turned it downward and dissected the skin over the chest a short distance so as to relieve the bone of the pectoralis major. I then with an angle cutting forceps, cut through the clavicle. This left the bone practically free. I caught the subclavian artery and vein behind the clavicle and tied them both. I then proceeded to dissect over the integument from the border, leaving the whole integument as far forward as the axillary border of the scapula. I then severed the artery and vein and turned the shoulder backwards with all that it contained; that is, with its muscles and with all the nerves and other tissues belonging to the shoulder. The operation was completed in practically about fifty minutes. I closed the wound by stitching the skin, putting in drainage tubes and dressed him. The shock was very great and he was exceedingly feeble when taken off the table. He lived through the night and on through the next day, when he gradually became uncon-

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

scious and died the next noon. Persistence of shock was the cause of his death. On the examination of the shoulder it was found that the disease had extended far up underneath the scapula.

My next case was a young lady, who came to me with her mother to consult me about a swelling on her shoulder. This, on examination, I believed to be osteosarcoma of the scapula. Profiting by my experience in my former case, I decided to try the effect of cutting away a part of the scapula, leaving the rest of the bone, enough of it, as I thought, to make a useful shoulder. She was put under an anesthetic and an incision was made along the spine of the scapula and transversely upward toward the root of the neck. The outer flap being provided for by dissecting back the skin from the spine of the scapula outward toward the axillary border. The scapula being thus exposed I made an incision with the angle cutting forceps, cutting through the body of the scapula far enough back to leave the spine of the scapula firmly adherent to the neck. When I reached the body of the bone I cut through the bone, lifting out the whole of the inferior angle of the scapula. In fact, cutting out about two-thirds of the whole of the scapula, leaving the subscapularis muscle. I adjusted some drainage tubes and closed up the opening and put her in bed. The wound healed without any untoward circumstances. The girl left the hospital in about three weeks with a very poor shoulder, but still a shoulder and arm that were of some use to her. There was but little loss of blood. The drainage was good and healing was completed without anything untoward in about three weeks. This was done during the summer months. She went home, a short distance from Kansas City, and remained well for some months. During the early winter there came an enlargement in the cicatrix. I did not know at that time what that could mean. I visited her at her home. She was feeble and very much debilitated. In about six weeks after my first visit to her at her home I visited her again and found the swelling much increased and she very much weaker. She was indeed so weak that it was impossible at that time to operate on her at all. This weakness continued, the growth continuing to enlarge, until she finally died, in April. This was my first case of infection of the bone, about which I shall have more to say in the future.

My third case was a negro at the City Hospital. During a clinic the nurse showed me a case of enlargement of the shoulder, wanting to know what I thought it could be. After an examination, I said it was an osteosarcoma of the shoulder blade. The man desired to know what I could do for it. Then I told him that I would have to cut away a large portion of the shoulder blade, but that I would not cut off his arm. This he consented to. I made an incision over the spine of the scapula and dissected the skin toward the vertebral spine, and then toward the axillary space. I reached forward cutting the spine of the scapula and cutting through the neck of the scapula, and removed the whole of the rest of the bone and subscapular muscle, leaving the spine and neck of the scapula alone. The dressing was done by the nurses at the City

Hospital. At the next week's clinic I saw him again. The wound was healing well, the drainage tubes had been removed and the shoulder seemed in good condition. The man left the hospital in about four weeks. The arm, of course, was a little better than a flail, and of no use to him whatever. The man I did not see again until the next winter, when he appeared in the hospital again with a large growth under the cicatrix at which I had removed the scapula. The growth was hard and indicated the possibility that there was a new growth occurring in the neck of the scapula and spine and throughout the whole wound. I proposed to him the removal of the whole of the arm and scapula, but this he objected to. I told him that I had removed the bone and that there was nothing left there but the cicatrix and that had become diseased and could be removed by removing the whole of the subscapularis (part of which I had left when I removed the scapula). He left the hospital without the removal of the tumor which had returned in the cicatrix. This was the second cicatrix that I had the tumor return in and showed me very clearly the terribly infectious character of the tumor—but more of this anon.

A Mr. C. called on me with an enormously large osteosarcoma of the scapula. He said that a year before he had gone to Chicago and consulted the surgeons there about having it removed. They refused to do it, saying, "he could not live through the operation." It was very large indeed, and showed symptoms of softening and breaking down. I told him the dangers were, that removing so large a part of his anatomy would be a severe shock to him. He said, "I don't care, I want to get rid of the shoulder." After consulting with him for some time we finally came to an arrangement by which I was to remove the shoulder and do the best I could for him. He was put on the table after being prepared and a large incision made over his shoulder, not, as I had formerly done, making a straight incision; but the tumor was so large I made an elliptical cut, lifting a large mass of skin off the spine of the scapula. The integument was dissected down quite to the axillary space. On the other hand the skin was dissected up quite back to the spine; through this large opening I was able to divide the zygomaticus major and minor and the levator anguli scapulæ. With the division of these I was now able to turn back the shoulder from the spine, removing the enormous mass and severing the subscapularis from its attachment to the ribs (the subscapularis was adherent to the ribs so fast indeed that a portion of two or three of the ribs pulled away as I separated the tumor from the body). The mass removed was enormous, weighing when put on the scales, a little over fifty-three pounds; and from a small man this was a great deal to be removed. He was put to bed, drainage tubes having been adjusted, and stimulants and light diet being freely administered to him throughout the night. The next day he was very much better and continued to improve for several days. The wound healed kindly and well. On the fifth day, however, he had a chill, which was followed by pneumonia. Bloody sputum was very abundant and on the seventh day he died.

The next case I saw was Mr. ———, who came with an open sore in his arm. The arm was swollen, red and enlarged. He told me it had been operated upon three different times for diseased bone, but that they had never found any diseased bone. It was discharging a large amount of bloody serum and showed very conclusively all the way up to the axillary that it was an osteosarcoma and not a tuberculous abscess. I proposed the operation of removing the arm at the shoulder joint. This he consented to and he was consequently prepared for it and put on the table for the operation. When the flaps were made at the shoulder joint I found that the disease extended above the neck of the scapula. I desisted in the operation and allowed him to come to, and consulted with him about the propriety of removing the whole shoulder. This, after a time he consented to, when he was again put under an anesthetic and the operation proceeded with, *secundum artem.* The clavicle was divided at the junction of the inner fourth with the outer three-fourths of the bone. The vessels were caught up and tied and severed. The nerves were divided and the whole shoulder was turned back. The whole of the subscapular muscle was filled with sarcomatous tissue almost as far back as the scapula extended. The shoulder was removed with complete success, the tissues underneath the shoulder blade were left, in apparently a healthy condition. The end of the clavicle that was left seemed healthy and everything, indeed, promised fair for a successful recovery. Drainage tubes were placed in the wound, the patient dressed and put in bed. Healing took place without any untoward circumstances, the patient leaving the hospital four weeks after the operation, in apparently perfect health. In about eleven months after the operation the patient returned to Kansas City with an enlargement of the sternal end of the clavicle. I was astonished at this, as no disease, apparently, was in any way connected with the clavicle. I put him in the hospital, prepared him for the operation and in due time dissected out the sternal end of the clavicle, being careful to keep as far from the bone as possible. It was enlarged to the size of a turkey egg and very red, sticking up almost directly forward. With a good deal of difficulty, I disarticulated the bone and closed up the wound, leaving the articular cartilage free. He went home in a week, apparently perfectly well. He has remained well and was in good health three years ago, since which time I have not heard from him. It is now twelve years since I operated on him and no recurrence having occurred, I take it that he is still in good health.

The next case I saw was a lady from Cass county. She came with a very large osteosarcoma of the shoulder. It was painful and distressed her a great deal. When I proposed removing the whole shoulder she readily consented to it, feeling, as she said, that she would get rid of the whole thing. She was put in the hospital and prepared for the operation. Assisted by Dr. B. I made the necessary incisions. I laid the tumor back, or rather the shoulder, ligated the vessels, and severed and dissected out carefully the subscapular muscles. Dr. B., in order

to assist me, took hold of the arm below the elbow and lifting it so I could remove the tumor, the arm suddenly turned and the strain came on the tissues and the vessels. The vein was forcibly pulled out from its attachment behind the clavicle, where the severence had been made. There was a sudden girdle of air entering the vein, the woman's face blanched instantly and the heart ceased beating and she was dead in a little more time than it has taken me to tell. The tumor was a round cell sarcoma and quite firmly attached to the ribs. The result of this operation was sad indeed. She was a young woman in the prime of life and had a good prospect of life before her. The sound of air entering the vein only needs to be heard once to be fully appreciated.

I wish now to call the Society's attention to the operation in its detail and its results.

In the first place, when there is a round or giant-celled osteosarcoma of the shoulder, never remove less than the entire shoulder, for if you do the disease will inevitably return in the dismembered bone and your patient will be no better than before the operation.

Second: In doing the operation the greatest care must be taken in order to completely sever and free the severed blood vessels from the adjacent tissues. That was the cause of the death of the lady from Cass county. Had the vessels been entirely divided and the tissues as well, the sudden jerk of the elbow bending would not have occurred and the operation could have proceeded to its termination with the ordinary results.

Third: The operation, to be reasonably successful, requires to be done early. Late operations mean involvement of a great deal of tissue adjacent to, or even at some distance from, the original seat of disease.

Fourth: Free drainage must be established. From the depth of the wound and the large involvement of lymphatic vessels, it is very necessary to employ plenty of drainage tubes. They should go to the bottom of the wound and come out as freely as they possibly can. All bone or bones that can possibly be infected by the disease, either by running through or adjacent to the tumor, must be removed.

Fifth: The technic of the operation is purely my own. When I performed the first operation I could find no assistance whatever in works of operative surgery and, of course, commenced the operation as my anatomical knowledge dictated by common sense.

Sixth: The man who undertakes this operation must be thoroughly familiar with the anatomy of the tissue that he is mutilating.

Seventh: No partial operation is admissible, as is shown by Miss A. W. and the man at the City Hospital, the disease being in the scapula. To cut the bone is simply to leave a nucleus behind from which the disease will again inevitably develop and a new tumor be formed from it.

GENERAL ANAESTHESIA.*

BY J. J. FARRELL, M. D., HANNIBAL, MO.

A prominent Eastern surgeon recently remarked that if he was to be the subject of a surgical operation he would be as choice in the selection of his anesthetist as in the selection of his surgeon. General anesthesia of late years has become to be more respected by the average physician and surgeon the cause of which is easily understood, for there is scarcely a week elapses that we are not confronted by some article in this or that medical journal of fatal narcosis from ether and chloroform; hence the day for the anesthetic specialist is ripe. In all communities, large or small, the young man, or the least experienced in the profession, is selected for the so-called least responsible position at the head of the operating table; general anesthesia is that condition in which we have a complete loss of consciousness and an entire abolition of reflexes, hence, it is dangerous in any hands and should invite on the part of the physician and surgeon a more conservative and conscientious consideration.

At any and all times one of us is called upon to administer an anesthetic, and we should be ever mindful of its many dangers.

Mixed narcosis, the administration of nitrous oxide gas with oxygen, is still in its infancy in this country owing to the imperfection of inhalers and the inaccuracy of the different quantities of gas; the A. C. E. mixture seems to be no improvement upon the old and the H. M. C. tablet has its disadvantages, especially in obstetrics both as to the effect upon the mother and child, therefore in this paper I will only treat of the two most powerful anesthetics, ether and chloroform, leaving the ethel chloride mixtures and subarachnoid punctures for some future date.

In the production of narcosis we notice that different parts of the nervous system possess different degrees of resistance; in the observation of Dr. Hewitt of London, they are overcome in the following manner, first the cerebrum, second the cerebellum, third the sensory nerves of the cord, fourth motor nerves of cord and fifth the medulla; while the anticipated effect upon the nervous system is to paralyze its various parts, we frequently notice that this condition is preceded by the stage of excitement; this is due to the fact that all general anesthetics act as stimulants in less than narcotic doses; this may be explanatory of the fact that septic cases take anesthetics well, owing to their stimulation by septic toxins. As has been seen the last portion of the nervous system to be overcome by the paralyzing influence of the anesthetic is the medulla and it follows that respiration and circulation are thus maintained long after practically all other bodily functions have been abolished.

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*Read before the Marion County Medical Society, April 16, 1908.

In the period of perfect anesthesia we have complete muscular relaxation, absence of corneal reflex and almost pin-point pupils, reaction to light is sluggish or absent and the state of respiration and the circulation not markedly different from the normal, except an occasional stertor, or snoring noise; while certain localities will still maintain a response to reflex irritation, such as the anus, perineum and bladder. The narcosis of ether is characterized by a phenomena of irritation and stimulation and a tendency to the production of asphyxia and by a marked depression as compared with chloroform while the narcosis of chloroform compared with that of ether is characterized by the absence of irritation and stimulation, by a tendency to the production of mechanical asphyxia, by the occurrence of depression. In the choice of the two most powerful anesthetics, ether and chloroform, the literature and personal observation should make us partial to the former; some prefer one, some the other; this I think is not due to the fact that we feel one is safer than the other, but that we have become more familiar with the use of the one owing to training and frequent administrations. From most reliable statistics, ether is found to be about five times as safe as chloroform; then ether undoubtedly is the anesthetic for the beginner to administer. Again, the presence of danger from ether can be detected while there is yet sufficient time to ward it off by the administration of stimulants, etc.; ether, when properly administered, will have fewer contraindications and should be employed in preference to chloroform in every case possible.

Chloroform may be employed when ether has failed, or in the presence of the history of trouble with a previous etherization; chloroform seems to be safer with children than adults, and especially adapted for obstetrical cases. Minor procedures for children are not of enough consequence to insure the liability of a general anesthetic; in other words we should prefer to let a child remain with an elongated prepuce until old enough to use a local anesthetic.

I have administered chloroform to a patient with valvular lesions of both sides of heart and see the patient take the anesthetic beautifully, and next day administer chloroform to an alcoholic and have total anuria as the result. The majority of fatal cases of narcosis occurs during the first ten minutes of administration; just why this should be the literature fails to enlighten us, and like other conditions of medicine when the etiology is protean the conclusions are indefinite.

We are all conversant with the preparation of a patient for general anesthesia, empty stomach, flushed bowels, and the removal of all foreign bodies from the respiratory tract; never begin an anesthetic without first familiarizing yourself with the condition of patient's pulse and any deviation from same during anesthesia will be more readily recognized; the anesthetist should always gain confidence of patient and assure him that his heart and lungs are in good condition and that they will have no trouble whatever as this will often obviate nervous phenomena on the operating table.

Some authorities recommend the hypodermic use of morphine about fifteen minutes previous to the administration of the narcotic; this I think is bad practice owing to its myotic action on the pupilary reflex, which is the chief index to the depth of narcosis, and is strongly contra-indicated with ether when we have any respiratory difficulty, anemia or old age.

Instruct the patient to breathe slowly and deeply and not antagonize the anesthetic; in applying the mask, at first allow a free admixture of air with vapor as this will not be so irritating or disagreeable.

The drop method of ether and chloroform seems to be the ideal one, especially is this true of ether, as this will permit the use of chloroform mask and avoid an ether pneumonia, which I think is often due to the inspiration of cold air radiated from the metallic ether inhaler. Never increase the anesthetic during the exciting stage; better permit the attendants to control patient and continue slowly, always being observant of patient's color and respiration, as the circulation is the last to fail. Let the left index finger rest on the facial artery; in this manner you may determine the condition of the pulse, while the right hand may be used to control the mask and elevate the jaw. Never permit the surgeon to begin the operation until the patient is thoroughly relaxed, as the first incision may bring on a deep inhalation causing an over distension of the right heart, shock and a sad accident.

Always watch the patient and not the field of operation; at intervals inform the surgeon as to the condition of patient; he may in turn be of assistance to you in detecting a cyanosis which first manifests itself in the condition and color of the blood; in spasmodic contractions of the diaphragm, preliminary to vomiting, push anesthetic, exclude air and patient will readily relax. Nearing the completion of all operative procedures about the rectum, always fortify the patient with a hypodermic of strychnia as the sudden cessation of the stimulus about this plexus is often followed by intense shock. As to the method of resuscitation from anesthetic syncope, we are all more or less familiar. Death from chloroform and ether may occur suddenly from paralysis of the heart, from the too energetic supply of vapor on a fatty or enlarged heart. Death may also occur suddenly from the falling back of the tongue over the epiglottis causing asphyxia. Death may also occur from coma, owing to a violent congestion of the brain, therefore beware of alcoholics, nephritics and epileptics. Death and septic pneumonia may be the result of vomited material gaining entrance into the larynx; death also may be the result of the combined symptoms already mentioned, associated with surgical shock.

As stated before, we are all more or less familiar with the method of resuscitation from anesthetic syncope, but I cannot refrain from reminding you that the rhythmical retraction of the tongue is our best respiratory stimulant, and that heroic doses of adrenalin has saved many lives. True, an anesthetic in the hands of an expert is free from many dangers attributed to it, but after being an eye witness to three fatal

cases of narcosis in the short period of one week, and then before the operator had made an incision, one becomes a little discouraged and wonders if all our observations and precautions are futile. Sometimes we are apt to think that the fatality of anesthesia depends upon the number of anesthetics one administers, or, if one has the least vestige of superstition, luck plays a very important role. All cosmetic surgery and unnecessary surgery in the abdomen is an imposition upon the anesthetist and without mental reservation he should object.

Time is an important factor and the words "sufficient anesthetic," from the mouth of the surgeon always comes happily ringing in the ears of the anesthetist. In all surgical operations surely the anesthetist shares half of the responsibilities, and when sad accidents occur on the operating table, it is only too natural to first think of the anesthetic, irrespective of shock and hemorrhage; hence, the compensation for administering anesthesia is entirely inadequate; especially is this true of major operations where the surgeon's fee is large. The physician who gives chloroform in a dental chair for a two dollar fee, surely is ignorant, or greatly depreciates his responsibility.

DISCUSSION.

Dr. Edward G. Blair, Kansas City: Dr. Halley's paper is not only unique, but it is an extraordinary paper. It takes a man with a large surgical experience such as Dr. Halley has had, to produce a paper of this character. One of the questions raised is, shall we operate on these malignant sarcomas, or leave them alone; and if we do operate, shall we make the operation thorough? The conclusion at which he arrives is, that we should operate, that there is nothing to be gained by avoiding operation, and that the operation offers a certain amount of relief. That is the most valuable demonstration he has made before this Society. All of us shrink from operating on malignant growths of this character, and when he has produced such results as he has recited, it is an encouragement for us to go ahead. I am impressed with the idea of the complete removal and going back to the very foundation of the trouble. I remember one case illustrative of this point where a diagnosis was made of tuberculosis of the ankle joint. On operation it was found to present features of a sarcoma which proved on examination to be spindle celled. Consent was given to disarticulate at the knee joint. This was done in the usual manner, but the wound failed to heal and the condition persisted. Scrapings were made, and on examination it was found to be a round cell sarcoma. It was simply an extraordinary development of a pathological condition which you can expect to encounter in cases of sarcoma of the limb. Subsequently the limb was amputated, with relief. This very well illustrates the point made by the essayist that you must go back. Another point relates to the technic. To handle these cases properly a man must be an experienced surgeon and devise his own technic.

LEUKEMIA.*

BY P. DONOHOO, M. D., JOPLIN, MO.

This is one of the few diseases that can be diagnosed only by the hematological findings. It is characterized by certain definite changes in the corpuscular elements of the blood—a hyperleucocytosis, a proportionate reduction in both the hemaglobin and the red cells, the occurrence of nucleated red cells, and the presence of swellings of the lymphatic and blood forming vessels, and finally by the occurrence of lymphatic neoplasms in the organs. Generally speaking leukemia may be divided into two general classes, myeloid and lymphoid; again the disease may be mixed, taking the form of both myeloid and lymphoid blood.

When the blood is of the myeloid type, the spleen is usually enlarged; there is a hyperplasia of the red marrow, resulting in internal tension in certain long and flat bones, and may develop nodular tumors along the course of the bone. These swellings sometime become sensitive to the touch, and also the seat of more or less inflammation. These conditions are usually well marked but transitional, or combination forms are occasionally observed and, moreover, these cardinal symptoms may be absent altogether, as we shall see by the report of a case herewith, where the blood-picture was that of myelogenous leukemia, and the spleen was not palpable. Lymphoid blood is found in the lymphatic type of the disease, though more rarely; this variety also is more rapid and more fatal than the form just described. It is more apt to occur in young subjects, and sometimes develops acutely and terminates fatally in two or three months. In this type of the disease the lymphatic glands, not the bone marrow, are the seat of hyperplastic proliferation. I am inclined to the belief that this malady is related to neoplastic processes. Our present knowledge of the pathology of the disease hardly bears out this theory, but the clinical course certainly resembles it very much. A great many conditions have been ascribed as predisposing causes, such as syphilis, long continued malaria, diphtheria, membranous angina, influenza and trauma. Coexisting tuberculosis has also been frequently observed. Cases of infection and heredity have been reported. The course may be acute, but many cases drag on for years. Intercurrent diseases, sepsis, etc., may temporarily change the blood-picture and render the diagnosis difficult. Leukemia attacks persons in the best years of life. Males are chiefly attacked.

Symptoms. In the myelogenous form the spleen usually enlarges, sometimes becoming of enormous size occupying one-half of the abdominal cavity. It may be immovable from adhesions; a sense of weight, dragging and oppression in the left side often being the premonitory symptoms. As a result of feeble circulation, edema of the feet generally

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

occurs, anasarca or adominal ascites, may develop; epistaxis is common; hemoptysis is rare; haematemesis may be the first symptom and the loss of blood be so great as to cause death. Bleeding from the gums, purpura of the skin and mucous membranes, and intracranial hemorrhages have been reported. Intestinal hemorrhages may occur or dysenteric process develop. Dyspnea is an early and characteristic symptom, and is due to anemia; headaches, dizziness and fainting spells are frequently observed. In lymphatic leukemia there is a general lymphatic enlargement, as a rule soft, isolated and movable, and varying considerably in the course of the disease as to size. The tonsils, lymph follicles of the pharynx, tongue and mouth may be enlarged. The lymphoid growths may occur in the liver, spleen, omentum, thymus gland and skin. The bone marrow is often replaced by lymphoid tissue. Death ensues, frequently caused by secondary septic envolvement.

Pneumonia or hemorrhages. The determination of the hemaglobin is rendered difficult by the increase of the white cells, the proportion often being 1 to 20, and even more. In lymphatic leukemia the leucocytosis is due to an increase of the lymphocyte cells; the increase is largely of the small lymphocyte (as high as 90 per cent., or 95 per cent.); eosinophiles and normoblasts are rare. Polynuclear cells in these cases, amount to only a few per cent. The total proportion of white and red cells, or the ratio they bear to each other, is of less importance in making a diagnosis than the differential count showing the kind of white cells present, and the ratio they bear to each other. In myelogenous leukemia there are, aside from considerable augmentation of the polynuclear cells, first, mononuclear neutrophiles, or cosinophile cells (Erlich's myelocytes), which do not exist in normal blood; second, absolute and relative augumentation of the "mastzellen" (polynuclear cells with basophile granulation); third, atypical forms (karyokinesis), extremely small or large forms, polynuclear cells (with granulation slight or absent). The red cells are always decreased, perhaps to two or three million per cubic millimeter. There are present nuclear cells (mostly normoblasts), less often poikilocytes, microcytes, and megaloblasts. In myelogenous leukemia there are also present mast-cells in the exudate.

Report of Case. Mr. S., age 43, married, of good personal and family history. He has been a business man all his life, vigorous and active, weight 195 pounds, until a few months prior to the first time I saw him at which time he weighed 158 pounds; pale and anemic and extreme sallowness of complexion, complained of being tired, pains in extremities, glands not palpable, spleen not enlarged. Complained of frequent colicky pains in the abdomen. His blood picture was as follows: Hemoglobin, 65 per cent., red cells, 2,600,000, white cells, 125,000 per cmm. Differential count showed polynuclear cells 45 per cent., small lymphocytes, 18 per cent., large lymphocytes, 8 per cent., myelocytes, 28 per cent., cosinophiles, 2 per cent. Under the influence of rest, proper diet, etc., together with Fowler's solution of arsenic and glycerite of

red bone marrow, he improved in two months until he weighed 172 pounds, a gain of 14 pounds. His hemaglobin was 80 per cent., red cells, 3,600,000, white cells, 45,000 per cmm. A differential count showed polynuclear cells, 56 per cent, small lymphocytes, 20 per cent., large lymphocytes, 4 per cent., myelocytes, 18 per cent. eosinophiles, 5 per cent. He remained in this condition for a while, then gradually declined to a state worse than when I first saw him. A change of climate was advised, and he has gone to a southern climate.

Treatment. Consists in rest, diet, change of climate, drug therapy, and the x ray. Rest is of the utmost importance, both mental and bodily rest. The patient should be absolutely free from work and business cares. Particular attention should be paid to the diet, having it of the best food, easily digestible and assimilable. A change of climate, if possible. The patient should be sent to a warm climate, of as even temperature as can be obtained, and the patient should be dressed in woolen garments, not burdensome, however, but so that he will not feel the atmospheric changes. There being no specific, our drug treatment is largely symptomatic. The drugs found most beneficial are arsenic, in form of the Fowler's solution, given in increasing doses until tolerance, and the extract of red bone marrow. The x ray treatment is, at present, in the experimental stage.

Conclusions. First: That leukemia is a malignant disease and therefore not curable unless, possibly, certain forms by the x ray treatment, and this being doubtful.

Second: One may have leukemia for a considerable time with no physical signs or symptoms sufficient to make a diagnosis without a careful blood examination. The high leucocytosis, spoken of by the older writers, is not of so much importance as the differential count of the leucocytes present.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:
Walter B. Dorsett, Chairman. M. B. Clopton, M. C. Shelton.

EDITORIAL

THE DEFENSE FUND.

The establishment by the Association of a defense fund and the creation of a committee whose duty it will be to assist in defending members against whom suits for civil malpractice may be brought, gives promise of meeting the endorsement of the members and of furnishing an additional bond uniting the medical men of this state. We are told that already the advice of the committee has been sought in several instances. The sum placed at the disposal of the committee is very small, yet it is hoped that by judicious expenditure of the money and by careful consideration of the cases many of them may not go to trial and the usefulness of the committee may not be disappointing.

We learn from the committee that Mr. Morton Jourdan, the distinguished member of the St. Louis bar, has placed his legal advice at the disposal of the committee gratuitously. It will be remembered gratefully that when the Association was incorporated Mr. Jourdan acted as our representative and asked for his reward only the privilege of being associated with the medical profession.

The committee hopes that those who are threatened with lawsuits will present to it a full statement of the case immediately, setting forth exactly the dates on which the alleged malpractice is said to have occurred together with the full names of those interested as well as copies of letters which may have passed between the plaintiff, or his attorneys, and the physician, as well as other documentary evidence which may have a bearing upon the case. This will insure prompt action and will avoid the necessity for extensive and frequent correspondence.

THE TUBERCULOSIS COMMISSION.

So many questions concerning the relief and prevention of tuberculosis in St. Louis have come up that it seemed good to the city authorities to appoint a commission of citizens to consider the best method of harmonizing and simplifying the work. We have the Board of Health, with its large responsibility; the different city institutions, with their inadequate accommodations for the tuberculous; the local society, with its ramifications and earnest workers; one or two large private sanatoria for consumptives, and, what is more important, the general awakening of the citizens to the necessity for more effective measures to control the plague.

The establishment of this commission is a fitting cap-sheaf for the various bodies devoted to the extermination of tuberculosis, and the harmonious and intelligent cooperation of these bodies can not fail to cause a material decrease in the mortality of this fateful disease.

The ordinance is as follows:

Whereas, the large mortality from pulmonary tuberculosis in St. Louis demands that action be taken by the Municipal Assembly for the limitation of this disease; therefore

Be it ordained by the Municipal Assembly of the City of St. Louis as follows:

Section One. The Mayor shall appoint a Commission of nine citizens to investigate the prevalence of tuberculosis in St. Louis and to report to the Municipal Assembly their findings, together with recommendations of measures for the limitation of the disease.

Section Two. The services and duties of the Commission above referred to shall terminate one year from the enactment hereof, at which time its report shall be submitted in full to the Municipal Assembly for its further consideration.

Section Three. The Commission, except the secretary, shall serve without compensation other than their actual expenses. The Commission shall organize by the election of a chairman and secretary at its first meeting. The time and places of meetings may be fixed by the Commission. The Commission is authorized to fix the salaries of the secretary and any other employes, to rent office room, to buy office furniture and fixtures and to secure necessary stationery and other printing. Bills for the expenses incurred by the Commission shall be approved and certified by the chairman of the committee.

Section Four. On or before the fifteenth day of May, nineteen hundred and eight, the Comptroller shall have authority to transfer from Municipal Revenue to "Fund for the use of the Commission on Tuberculosis" the sum of Twenty-five hundred dollars.

It will be seen that the function of the Commission is advisory, rather than judicial or executive. It is organized as follows: Dr. William Porter, chairman; Mr. J. H. Lynch, vice-chairman; Mr. R. J. Newton, secretary; Rev. Timothy Dempsey, Mr. Edward F. Goltra, Rev. B. T. Kemerer, Mr. John F. Lee, Mr. D. C. Nugent, Mr. Charles A. Stix.

Already statistics have been gathered from almost all the large cities and state boards in the United States and Europe, and exact statements are being secured from our local institutions, clinics and from the Board of Health. Visits have been made to the city hospitals, quarantine, Mount St. Rose, etc., for the purpose of recommending better adjustment of the city and individual efforts. From time to time the advice of our health officers, physicians, and individuals and organizations in touch with the great work, will be sought.

The appointment of this commission and the compulsory registration ordinance, in addition to other efforts, place St. Louis in the front rank of cities active in antituberculosis work. It may be added that the ordinance was passed by the Council and House of Delegates without a dissenting vote and promises are given by our legislators to aid the Commission in every way.

FOR THE ADVANCE OF PSYCHIATRY.

Perhaps one of the most encouraging signs of the times, in relation to the advance of medical science, is the fact that wealthy laymen now, more frequently than at any previous period, willingly donate large sums of money for the purpose of founding institutions and laboratories where diseases that have baffled the skill of our most expert clinicians may be studied by trained men, unhampered and unhindered by the more pressing demands of earning a livelihood in practice. Medical science of the present age has been advanced through the gift of large sums of money to a far greater extent than ever before in the history of the world, and the relief and control of disease has been correspondingly greater than in any generation in all medical history.

The recent gift from Mr. Henry K. Phipps of Philadelphia, of $750,000 to the Johns Hopkins University, for the purpose of building, and endowing for ten years, a psychiatric addition to the Johns Hopkins Hospital, is the beginning of what will undoubtedly prove to be a notable advance in this branch of medicine, already highly developed through the unselfish labors of scientific medical men. This munificent gift places the medical profession, and, in a far higher degree, the general public, under new obligations to the generosity and philanthrophy of Mr. Phipps, who has, in addition to this donation to the advance of psychiatry, established from his own funds the Phipps Institute of Philadelphia and the Phipps Dispensary for Tuberculous Patients at the Johns Hopkins Hospital—two institutions where the great problem of controlling the ravages of tuberculosis is being studied. Dr. Adolph Meyer of New York has been appointed director of the psychiatric clinic and professor of psychiatry in the new institution.

GIFT TO THE SKIN AND CANCER HOSPITAL.

The St. Louis Skin and Cancer Hospital has received the munificent gift of $100,000 from Mr. George D. Barnard of St. Louis. This money is given to the Hospital for the purpose of purchasing a suitable site for a new building and properly equipping the institution for the treatment of cancer and diseases of the skin.

This is a noble gift and most fittingly bestowed, a monument to the generosity and philanthrophy of Mr. Barnard, which will endure in hearts made happy through surcease of pain. The name of the institution will be changed to the Barnard Free Skin and Cancer Hospital, and will remain forever a free institution.

Although it was established only three years ago, the Skin and Cancer Hospital in St. Louis, during this comparatively short period, has become well and favorably known in the scientific world through the intelligent work of its medical staff in the care of cancer and diseases of the skin, and for original research into the cause and treatment of these diseases. With the improved conditions and larger facilities which the gift of Mr. Barnard will provide, the present capacity of the hospital will be doubled and the systematic investigation into the cause of cancer —a malady which annually destroys approximately 36,000 lives in this country—can be prosecuted with more scientific methods than has been possible hitherto.

PROFESSOR MARTIN'S VISIT TO ST. JOSEPH.

The medical profession of St. Joseph had the honor recently of entertaining one of the most distinguished surgeons of the old world, and a gifted teacher whose fame is international, in the person of Prof. A. Martin, of Berlin. Through the instrumentality of Dr. O. B. Campbell, who is a former student and close personal friend of Prof. Martin, he was persuaded to visit St. Joseph on May 18. Arriving at 8 o'clock in the morning, Dr. Martin was welcomed at the station by Dr. Campbell and a committee of physicians. After a breakfast at the Benton Club, he was given an automobile ride around the city, and to the State Hospital for the Insane, No. 2. At 11 o'clock he lectured to a large audience of physicians, students and nurses at the Ensworth Medical College, and at 1 o'clock he was the guest of honor at a luncheon at the Metropole, where sixty members of the St. Joseph-Buchanan County Medical Society were gathered to welcome him. Dr. H. S. Forgrave, president of the Society, acted as toastmaster, and in introducing the honored guest, referred to him as the greatest living teacher of gynecology, at whose feet have sat many of America's most brilliant surgeons.

BEQUESTS TO ST. LOUIS INSTITUTIONS.

Washington University of St. Louis will be enriched by a bequest of $100,000 from the estate of the late Wm. Barr, founder of the Wm. Barr Dry Goods Company in St. Louis. This money is to be used exclusively for the benefit of the Manual Training Department of the University.

In addition to the money bequeathed to Washington University, bequests were made to other St. Louis institutions as follows: St. Luke's Hospital, $10,000; St. Louis Children's Hospital, $10,000; Episcopal Orphans' Home, $10,000; Protestant Orphans' Home, $5,000; St. Mary's Infirmary, $5,000; Bethesda Home, $5,000; Memorial Home, $5,000; Home of the Friendless, $5,000; Blind Girls' Home, $5,000.

SYSTEMATIC ORGANIZATION IN KANSAS CITY.

The Jackson County Medical Society has taken up systematic methods of organization, following the plan of the Chicago, Philadelphia and St. Louis medical societies, and dividing the county into districts. A representative from each district has been appointed on the general organization committee, thus forming an organization committee of twenty-seven, one for each ward in Kansas City and Independence, and one for each township in the surrounding country. The secretary, Dr. E. L. Stewart, has begun the compilation of a card index of all the physicians of the county, and is endeavoring to obtain personal data regarding all members of the profession in the county. Without doubt, the work in Jackson County will be as productive of good results as that in the other large cities which have adopted this method.

SCHOOL HYGIENE.

The *Journal of School Hygiene* is a new publication, the first number of which has just been published. One of the objects of the Journal is to present the methods in use in this and other countries and the results obtained, in the work of improving the hygienic conditions of schools, and to awaken public interest in the importance of this subject. The Journal is issued by the American School Hygiene Association which numbers among its officers many eminent physicians.

The Journal deserves and should receive the earnest support of all physicians who are interested in this phase of medical endeavor,—and. practically, that includes every practicing physician in the country,—and will be a source of authoritative information concerning the means and measures advocated and adopted in all parts of the world to improve the hygienic conditions of school life. The continuance of its pub-

lication will depend entirely upon the subscription list, as it is not intended that it should be, commercially, a money-making venture. The subscription price is 50 cents per annum, this low rate being fixed so that every one who is interested in the objects of the Association may subscribe without hardship. The Journal is edited by Dr. George S. C. Badger, 48 Hereford street, Boston, Mass., to whom all communications should be addressed. Papers and discussions of questions bearing on the subject of school hygiene are solicited.

NORTH MISSOURI MEDICAL ASSOCIATION.

This Association met at Moberly, June 18th and 19th. About sixty-five physicians of the northern section of the state attended the meeting and were cordially entertained by the local profession.

Quite a number of interesting papers were read and the discussion upon these was spirited and full of helpful comment.

The following officers were elected: President, Dr. E. C. Grim, Kirksville; first vice-president, Dr. W. L. Brosius, Gallatin; second vice-president, Dr. G. O. Cuppaidge, Moberly; treasurer, Robert Haley, Brookfield; corresponding secretary, Dr. E. C. Callison, Kirksville; recording secretary, Dr. Oliver McEuen. Judicial Council: Dr. J. D. Brummall, Salisbury; Dr. C. B. Clopp, Moberly; Dr. H. C. Dixon, Holiday; Dr. W. L. Peters, Cameron; Dr. Woodson Moss, Columbia.

NEW AND NON-OFFICIAL REMEDIES APPROVED BY THE COUNCIL ON PHARMACY AND CHEMISTRY.

Lecithin Solution (Fairchild Bros. & Foster).
Lecibrin (Fairchild Bros. & Foster).
Glycerole Lecithin (Fairchild Bros. & Foster).
Casca-Laxative (H. K. Mulford Co.).
Bismuth Hydrate Comp. (H. K. Wampole & Co.).
Liquor Sedans (Parke, Davis & Co.).
Liquor Sedans without Sugar (Parke, Davis & Co.).
Liquor Sedans with Cascara (Parke, Davis & Co.).
Capsules Glycerophosphates Comp. (H. K. Mulford Co.).

Isoform Powder (Koechl & Co.) having been withdrawn from the market, has been omitted from the list of articles accepted for New and Non-Official Remedies, at the request of the American agents.

Investigations made under the direction of the Council having demonstrated that the claims made for Isopral (Farbenfabriken of Elberfeld Co.) are not justified by the facts, the Council has voted to omit this article from the list.

IN MEMORIAM.

DAVID COALTER GAMBLE, M. D.

David Coalter Gamble, was born in Saint Louis, September 16th, 1844. His father, Hamilton Rowan Gamble, was an eminent jurist and some time Secretary of State for Missouri, Chief Justice of the Supreme Court of Missouri, and Governor of Missouri during the period of the Civil War. His mother, Caroline Coalter, of Charleston, South Carolina, was a gentlewoman of quiet but strong personality, whose characteristics were markedly developed in her son.

Dr. Gamble's preliminary education was secured in Wyman's School, then in Saint Louis, later in Alton, Ill.; in Lawrenceville, N. J., and Norristown, Pa. He attended the Washington and Jefferson College and later the Saint Louis Medical College from which he obtained his medical degree in 1869.

From the medical school he entered private practice in which he was continuously and successfully engaged up to the time of his death. His interest in medicine was definitely otologic in character and his practice was confined to this branch.

On December 22nd, 1864, he married Flora Matthews, of Saint Louis, from which union have been born thirteen children. Mrs. Gamble and eleven children survive him.

During the early '80's, conjointly with Dr. E. C. Dudley, of Chicago, Dr. Gamble edited the *Saint Louis Medical Review.* He was a charter member of the Faculty of the Beaumont Hospital Medical College, holding the chair of Otology. This chair he occupied until he resigned therefrom in 1890.

He was appointed Chief of the Clinic for Diseases of the Ear in the Policlinic Hospital in 1890. In 1892 he was appointed to the chair of Clinical Professor of Diseases of the Ear in the Missouri Medical College. In 1899 when the Missouri Medical College coalesced with the Saint Louis Medical College to form the Medical Department of Washington University, Dr. Gamble filled the two positions in the University which he had hitherto held in the former school. At the time of his death he was Clinical Professor of Otology in the Medical Department of Washington University, Clinical Professor of Otology in the Washington University Hospital Dispensary, member of the staff, Department of Otology, Washington University Hospital;—also, since 1893, Attending Physician, Diseases of the Ear at the Martha Parsons Hospital.

Dr. Gamble was a member of the Alumni Association of the Medical Department of Washington University, Saint Louis Medical Society, Missouri State Medical Association and the American Medical Association.

An omnivorous reader and lover of books, he spent freely the midnight oil, his mind browsing contentedly, the while, among the writings

of English, French and German worthies; while for deeper and more stimulating draughts he quaffed the Phalernian of the Latin classics.

Some five or six years ago gastric hemorrhage with tarry stools led to the thought of a possible gastric cancer,—this however was finally negatived and the diagnosis of a gastric ulcer was made. Since which time although his general health might be said to have been fairly satisfactory,—gastro-intestinal disturbances were observed to occur,—rather more frequently during the past three or four years.

About May the first he was not feeling up to the mark,—he continued, however, his usual work. On the third he felt considerably better,—the night of the third brought anginal pains, radiating to the shoulders and arms. These had markedly ameliorated by the morning of the fourth. His physician recommended that he remain in bed but he retorted that as he had been obliged to miss several days from his clinic he must go to the Hospital,—that he expected a class to be in attendance,—he must not disappoint them,—his office he was willing to miss,—but he must be at his clinic. He remained at home, dressed, pending his clinic hour; and was able to assure his family at various times during the day that he was better,—was reasonably comfortable. Shortly before 3:00 p. m., following an insignificant exertion, acute cardiac dilation developed,—and the end came,—May 4, 1908.

He loved his profession, he loved and, through his profession, faithfully served his fellowmen;—how many of us, think you, at the age of 64, will conduct a daily clinic averaging two hours of hard work, for the sheer love of it? His relation to his clinical assistants was of the warmest character, and they loved him; he delighted not only in working with them and helping them; but daily rejuvenated himself by contact with their keen young minds. Yet he was no basil feeding on the brains of men; for, in recompense, he gave richly of himself and the choice wealth of his long years of clinical experience.

The world needs men of the fashion of David Coalter Gamble. It is a proud and truthful tradition that medicine has always numbered such among her sons,—the very salt of the earth. "Thou must be like a promontory of the sea, against which, though the waves beat continually, yet it both itself stands, and about it are those swelling waves stilled and quieted."

Resolved:—That the Saint Louis Medical Society recognizes the severe loss sustained in the death of Dr. David Coalter Gamble.

Resolved:—That a copy of this Appreciation and a copy of these Resolutions be spread upon the Minutes of this Society, a copy published in *The Weekly Bulletin,* and a copy forwarded to the family of Dr. Gamble.

Norvelle Wallace Sharpe, Chairman.
William Shirmer Barker,
Robert Barclay,
The Committee.

[An abstract of resolutions adopted by the St. Louis Medical Society.]

JOSEPH BERNHARD ROSS, M. D.

Dr. Joseph Bernhard Ross was born July 1st, 1857, at Muenster, Westphalia, and died there April 14th, 1908.

He studied medicine and received his degree at Greifswald, and after further study at Berlin, served for a time as surgeon in the Prussian Army, and on board a passenger ship.

In 1887 he located in Melbourne, Australia, where in 1888 he was married to Miss Lillie Beere.

In Australia he devoted himself largely to surgery in which branch of practice he was very efficient, at the same time doing a great deal of original work in pathology and bacteriology. In 1892 he returned to Germany, studying at Tubingen, Hamburg, Stockholm and Berlin, afterwards visiting Paris and London, and returned to Australia in 1893.

He found that the panic of that year had caused him serious financial losses, and so disorganized business as to cause it to seem inadvisable for him to remain, so he came to America and located in St. Louis, where the remainder of his professional life was passed.

Early in the present year, failing health caused him to return to Germany for treatment and change of climate.

This proved unavailing, however, and he died at the residence of his brother in Muenster, the city of his birth.

Dr. Ross was a man who had added to the thorough training of the German Schools the products of a close study of medical literature, of original research and study and observation of cases in practice.

He had a truly scientific mind, applying in his practice all the resources that the advance in medical knowledge has made available, not with the mere design of satisfying a scientific curiosity, but with the object of applying the knowledge thus gained to the alleviation and cure of the afflicted. In this he was unusually successful. He was an able diagnostician and skillful therapeutist and surgeon, and not overlooking the individual in the patient, he was to his patients a loved friend as well as a trusted physician. In recognition of the loss which the medical profession and the community has sustained by reason of his untimely death, your committee offers the following resolutions:

Whereas, it has pleased Providence to remove from our midst Dr. Joseph Bernhard Ross, a man who was respected and honored for all his scientific attainments, high personal character and useful activity professionally; therefore be it resolved;

That in his death the St. Louis Medical Society has lost a useful and honored member, and that the Society hereby tenders its sympathy to his bereaved family.

Resolved, that a copy of these resolutions be sent to the family of the deceased.

Respectfully submitted,

F. J. Lutz,
A. H. Meisenbach,
M. W. Hoge,
The Committee.

[Resolutions adopted by the St. Louis Medical Society.]

CORRESPONDENCE

WAR AGAINST TUBERCULOSIS.

To the Editor:

In answer to your request for information concerning what is being done in our state, in the crusade against tuberculosis, I beg to submit, in brief, the following:

In the State.—The Missouri State Sanatorium for Incipient Tuberculosis, was opened last August. The State has already appropriated $185,000.00 in addition to which there have been liberal private grants. It is located at Mt. Vernon, on the southern slope of the Ozarks, two pavilions are finished, and the executive building and power house are under way. The present capacity is forty. With each new building from thirty to forty more can be accommodated.

The Sanatorium has been a large factor in the educational work in the State. So far as may be judged from ten months' experience, the results are much better than were expected. A Tuberculosis Sanatorium, at Springfield, is being planned by the local society and already $15,000.00 is available. It is reported that a private Sanatorium is building at Mt. Vernon, and $8,000.00 was subscribed by individuals to start the plans.

Local organizations have been effected at Kansas City, St. Joseph, Springfield, Gape Girardeau, Owensville, Jefferson City, Fayetteville, Tipton, New London and St. Louis.

The State Society for the Prevention of Tuberculosis, under the presidency of Dr. Homan, is doing good, educational work.

In St. Louis.—The St. Louis Society for the Relief and Prevention of Tuberculosis was organized in 1905. Its work has been largely educational and relief. 250,000 leaflets and cards have been distributed and stereopticon lectures in school yards were given to 65,000 people. In addition Tuberculosis exhibits and lectures were held in a number of churches and halls. A total number of 58 meetings constituted this part of the work for 1907. Exhibit displays were arranged for show windows on prominent down-town corners. The Society employs two visiting nurses, whose reports show nearly 5,000 visits, or about 400 each month.

A special tuberculosis clinic is held by the health department and by many hospitals. A site for several acres of beautiful ground in the western part of the city has been secured for a special hospital for tuberculosis, by the St. Louis Society. This will probably be open in July.

One of the long steps forward, taken by St. Louis, in the active work against tuberculosis, is the law which makes it compulsory for physicians to report each case of tuberculosis to the board of health. These reports are kept under lock and key, but it is required that the

house be fumigated so soon as the patient is removed. By this means much is accomplished in fighting the disease, especially in the tenement districts. The anti-spitting law is being fairly well enforced, and it is a fact, that the fines more than equal the amount of the salaries of the special officers employed under this act.

Mt. St. Rose Hospital for Consumptives, has cared for 1,600 patients in five years. Its capacity is soon to be doubled. In the new addition there will be a larger laboratory, a small amphitheatre and an operating room.

The Municipal Commission on Tuberculosis, appointed by the Mayor under a city ordinance, passed at the request of the St. Louis Society for the Relief and Prevention of Tuberculosis, is organized to investigate the prevalence of the disease in St. Louis, and to recommend measures for its limitation.

A careful revision of the above will convince the reader that Missouri is well to the front, and in some respects in advance, in the organized state and municipal work in the limitation and relief of tuberculosis.

WM. PORTER, M. D.

SPRINGFIELD, MO., April 30, 1908.

TO THE EDITOR:

At the meeting of the Southwest Missouri Medical Society, held at Springfield, April 23d and 24th, the following report on medical legislation was presented by the Committee on Public Health and Legislation.

The report was unanimously adopted by the Society, and it was ordered that a copy be sent to the State Medical Journal with a request that it be printed in the next issue of the JOURNAL.

Yours Truly, H. S. HILL, M. D.,
Secretary Southwest Missouri Medical Society.

REPORT ON MEDICAL LEGISLATION.

The problem of medical reciprocity with Missouri and the other states of the Union, seems to be moving toward a satisfactory solution. An item of vast importance was taken into account when our State Board of Health set a standard for accredited medical schools. We hope advancement will be made until some proper standard of medicine shall have become general throughout the Union, or our Federal government shall have given us a satisfactory pattern for adoption in all the states.

Next to the problem of meeting the requirements for gaining permission to practice medicine legally, comes that of proper compensation for services rendered. There is no reason why the state should require so high a grade of qualifications and be so exacting of services of physicians and at the same time grant so little in compensation. The profession is willing, however, to meet the state's high requirements; now let the state do its duty to the profession. The state owes it to the profession of medicine to allow a better way of collecting bad debts than now obtains, and to bear at least half the burden of caring for the

penniless sick. We sincerely hope that neither the state nor the profession will allow this inequality to longer remain uncorrected. Both will gain materially by the change,—the state in services for its poor, and the profession in the gratuity long overdue and the tangible wherewithal to meet the last half of unpaid bills.

Considerable advancement has been made in the laws governing the criminal practice of physicians, but there yet remains some things to be done in the way of law-making to close up the loopholes in the net the state is spreading for this class of criminals.

We are indebted to Mr. John L. McNatt of Aurora, County Attorney of Lawrence County, for assistance in preparing a digest of the laws governing the criminal practice of physicians in Missouri. These laws we find about as follows:

SYNOPSIS OF LAWS GOVERNING THE CRIMINAL PRACTICE OF PHYSICIANS.

The law regulating criminal practice of physicians in this state first became noticed by the legislature of this state in 1855, which provided that any person who should administer to any pregnant woman any medicine, drugs or other substances for the purpose to promote or procure the death of a quick child, or destroy the same, should on conviction be guilty of manslaughter in the second degree, which was made a penitentiary offense.

This same statute in substance remained in force until the provision of 1901, wherein the legislature attempted to make by new statute the act of abortion manslaughter, regardless of whether the child was quick or not. This Section is known as 1825 R. S., 1899, and was repealed by said act of 1901, Session Act, 128.

It will be seen by referring to Sec. 1825 of 1899, which was repealed by Session Act of 1901, that it was not a crime under that Section unless the child was quick within the legal definition of "quick child," which was according to the court definition different from that recognized in the medical profession, in that the child is not regarded as quick, at the common law, until maturity of same was such as to create a motion.

The Act of 1901, as above mentioned, was by the court of this state held to be unconstitutional on the ground that it provided that manslaughter, as known to the law, could not be without there was death of some person in being, and the Act providing that at any stage of gestation would be the offense of manslaughter, the court held such could not be under the definition of quick child; for instance, there could be no manslaughter where the child is not quick, therefore, the law is invalid.

We also have another statute known as Sec. 1853, which has been on the books since about 1865, with practically no change, which makes it a misdemeanor for any person to administer to any pregnant woman any medicine or drug whatever, for the purpose of procuring an abortion or miscarriage, unless the same shall be necessary to preserve the life of the woman, and shall be advised by the physician to be

necessary, makes the act, regardless of the stage of maturity, a misdemeanor, which, of course, only carries with it a jail sentence and a fine as the maximum punishment.

This Section also adds that in case the woman should die, it shall be manslaughter in the second degree, and, of course, carries with it punishment in the penitentiary.

You will see, therefore, that up to this time, to-wit, prior to the legislature enactment of 1901, there was no valid law in the state of Missouri, making it a felony to commit abortion, but it was only a misdemeanor, unless the state of maturity of the child was such as to be regarded as quick, and that after the repealing of Section 1825 by Session Act of 1901 and since said act having been held invalid by the Supreme Court, it left practically one statute, the one for misdemeanor, known as 1853, R. S., 1899.

The last legislature, however, realizing the condition of the law governing the legal practice of this character, passed a law which governs the whole field of abortion, makes it very broad in its application as to the distinction of quick and unquick child, and makes the abortion or miscarriage, or either, a felony; also provides for the revoking of any physician's license upon presentation to the State Board judgment of conviction of any physician in this state.

This act was provided March 20, 1907; this act certainly is sufficient in definition and application of this crime to cover almost any kind of device that might be resorted to by any person to bring about abortion or miscarriage.

The same legislature, realizing the difficulty of proving the cases of this kind, also passed an act requiring the testimony of physicians who may have been called in attendance in such cases, also making the dying declarations of any woman competent in prosecution of any medical practitioner who has had criminal operation upon her. Under the criminal law as the case stands, with this aid of having thrown off the confidential relations which exist between the patient and physician, we can only think of one more item that can be added to Sec. 3635 R. S., Session Acts of 1907, viz.: That in all prosecutions of criminal abortion to compel the woman to give testimony of the facts in her knowledge, and offering her absolute immunity from prosecution, as in the law she is really a party to the crime. By doing this, the evil practice of this character would soon be blotted out. We again recite that the acts of 1907 with the suggested change, seems ample to cover all cases of this character, and we know of no means or device that could be resorted to by physicians to relieve them from the liabilities of this statute, if we can get testimony sufficient to authorize conviction.

The law as it now exists is plain and with the addition of compelling the woman to testify we think the legislature of the state has done all within its power to punish people offending against the statute.

In regard to the State Board of Health, will say that the statute provides for the creation of a State Board of Health and that before

this Board of Health all physicians must make satisfactory proof of their qualifications and moral character before certificate is issued to them.

Up to 1903, this Board had very limited power regarding their authority to inquire into and revoke certificates of physicians after having been granted; and in 1903 their power was enlarged by legislative enactment so that now unprofessional conduct of any physician upon a charge being made to the Board can be investigated and the Board may revoke the license of such physician, after giving such physician opportunity to be heard before the Board.

Among the acts that are especially named in the law to be sufficient to revoke the license, is "habitual drunkenness, or excessive use of narcotics, or producing criminal abortion." However, the statute says this does not exclude any other acts, but that any other immoral act is sufficient for revoking license.

It would seem that this board has no statutory authority to compel attendance of witnesses, nor are they bound by any technical rules of law governing any kind of evidence to be used.

Their action for revoking certificates can also be reviewed by the Circuit Court, provided the complaining party files an affidavit as required by the statute, and in the County where the hearing was had, the Circuit Court will hear and try the case *de novo*.

However, in view of the other statutes, if the Board should have damageable testimony of immoral character and unprofessional conduct, the case would always be made stronger in the Circuit Court against the practitioner, because the evidence could be compelled and forced, thus giving an opportunity to secure evidence that could not be secured before the Board.

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There could be a statute enacted by the legislature, authorizing and giving this Board power of subpœna, and contempt for disobedience to any order made by them with reference to testimony. Also to authorize the employment of counsel, who should represent the Board in all matters, to be paid out of the general fund, or a fund to be created for that purpose, either as a salary or fee. It should also appear from the statute that when any party files affidavit alleging any unprofessional act of any physician it should be compulsory on said Board to call a meeting and have a trial and hearing and providing only that a rehearing of the case could be had on *certiorari,* and that review would only be submitted on the record as made by the Board, and no testimony from either side be permitted, except what was contained in the transcript, or that had before the Board.

The profession has been interested in—

1st:—An act to collect vital and mortuary statistics.

2nd:—To divorce the examining from the licensing Board.

3rd:—To restrict and limit time for filing damage suits.

4th:—To appoint local Boards of Health by the State Board.

5th:—To prevent corporations from practicing medicine.

The 5th has already been disposed of satisfactorily by court decision. The 2nd, that relating to separation of the examining and licensing power, is receiving attention of the American Medical Association, and should await the report of the committee having it in charge. The 3rd, relating to time of filing damage suits, is of minor importance as compared to many other things in the list of needed legislation, and particularly an act that would open wider the scope of authority and usefulness of the Board of Health for practicing sanitary science. Were the duties of the Board properly enlarged in this particular, the 1st and 4th, those relating to vital statistics and local Boards of Health, will have been cared for. It is to be hoped that another general assembly will not have adjourned before placing the Board of Health in this woefully neglected field, to perform, unshackled, duties that are to be of such incalculable benefit to the people of the state.

To recapitulate as to our wants:

1st. Let us ask for one law to aid us in the collection in one class of bills, and another to reimburse us for half of our professional contributions to charity.

2nd. Let us have an amendment granting immunity to the woman in criminal abortion cases and compelling her to give testimony of all she knows.

3rd. Let us have an amendment, in trials for revocation of certificates, empowering the Board of Health to punish for all contempt of its court, and to employ legal counsel; and divesting it of its option to try cases when charges have been preferred; another amendment should restrict rehearing to *certiorari* only, and review to the records, without resubmission of testimony.

4th. Let us ask that laws be passed making the Board of Health the agents of the state for the dissemination of hygienic and sanitary measures,—the officers for the enforcement of sanitary laws.

It will be a duty we as members of the profession owe to ourselves, our people and to the state, to have, so far as lies in our powers, none but good and philanthropic men elected to membership in both houses. Our cause and welfare of the people will have just consideration at a law-making conference of good men.

It is not best to ask too much after so extended a period, in which so little was sought; we should demand a few good laws at a time and they should be carefully drawn at first, and amended later whenever and wherever time or enforcement finds them defective.

It is the duty of every physician to take deep interest in all proposed medical legislation and when the profession thus gives the matter the attention its importance demands "our pity, our sympathy, our indignation, our enthusiasm, and our charity will be translated into written laws to be preserved and to be continuously operative."

A. H. Madry, M. D., Chairman.

COUNTY SOCIETY NOTES

CALDWELL COUNTY MEDICAL SOCIETY.

The Caldwell County Medical Society met in Polo, April 15th. Present, Drs. C. O. Dewey, W. T. Lindley, S. D. Smith, G. B. Cowley, R. L. Mount, R. K. Dodge, T. W. Scanlon, Tinsley Brown, W. S. Shouse, J. E. Gartside, H. DaLamater, H. A. Schroeder, G. S. Dowell, C. L. Woolsey and G. W. Goins, and visitors Drs. A. W. McArthur and D. L. Shumate, of Kansas City, by invitation.

Dr. G. W. Goins read a paper on "Cerebrospinal Meningitis," Dr. G. S. Dowell one on "Congenital Talipes Equinus Varus," Dr. D. L. Shumate one on "Treatment of Chronic Dacryocystitis," Dr. A. W. McArthur one on "Some Considerations Regarding the Treatment of Fractures in the Neighborhood of Joints, and Report of Three Cases." Dr. R. L. Mount reported a case of rapid development of tuberculosis of humerus, and Dr. J. E. Gartside gave a talk on "The Quarantine of Contagious Diseases."

The next meeting will be held in Cowgill in July.—Tinsley Brown, M. D., Reporter.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The Cape Girardeau County Medical Society held its regular monthly meeting at Jackson, June 5th. In the absence of the president and the secretary, Dr. Atkins acted as chairman and Dr. Vinyard as secretary.

Program: Dr. Henderson read a paper entitled "Pathology and Treatment of Acute Endocarditis;" Dr. Vinyard followed with a paper entitled "Symptomatology and Diagnosis of Chronic Endocarditis." There was a liberal discussion on both papers and the authors were complimented for the care and attention given the subjects treated of. Dr. Frisler was invited to take part in the discussion and his name was submitted to the board of censors for approval for membership.

On motion the Society adjourned to meet at Jackson July 3rd.—E. H. G. Wilson, M. D., Secretary.

CHARITON COUNTY MEDICAL SOCIETY.

The regular meeting of the Chariton County Medical Society was held at Salisbury, May 14th. Nine members were present.

Dr. Tatum stated that the steel pin in the hand of the lady (as presented by him in a clinic at our last meeting) had been located by the x ray and removed, the patient making a good recovery.

Two interesting cases were presented. These were examined and the conditions discussed by the members present.

Dr. Gaines read a good paper on appendicitis, which was complimented and well received. The doctor gave a tabulated statement of twenty cases operated on, with a mortality of two or three per cent. Pus was found in all the cases. Dr. Gaines commences the treatment by a brisk dose of calomel, followed by Epsom salts, afterward some opiate to procure rest, restricted diet and food per rectum. The members generally endorsed Dr. Gaines' treatment.

Adjourned to meet at Brunswick on June 11th, 1908.—C. A. JENNINGS, M. D., Reporter.

GREENE COUNTY MEDICAL SOCIETY.

MEETING OF APRIL 24TH.

The program for the "Post Graduate Course" was received and accepted by the society.

Dr. Fulton read an interesting paper on "Hemorrhoids." He said we should first make a careful examination and a correct diagnosis then, if possible, remove the cause. Portal congestion is one of the most common causes. The treatment at first, should be palliative. External piles usually yield to simple measures but the treatment of internal piles may call for surgical treatment. Drs. Boyd, Coffelt, Patterson and Tefft discussed the paper.

MEETING OF MAY 8TH.

Dr. G. B. Dorrell, of Republic, was elected to membership in the society.

Dr. C. S. Neer read a very interesting paper on "Comatose Pernicious Malaria. He said that in the comatose form the diagnosis is very important because of the effect of the early institution of correct treatment. In the majority of cases the aestivo-autumnal parasite occurs. The coma depends on the parasites present, the amount of toxin secreted by them, and their location in the brain. It usually occurs in warm weather in persons who have suffered from malaria and have not been properly treated.

It is a severe malarial infection with changes in the spleen, liver and kidneys, but the most striking change is in the brain where actual thrombi of malarial parasites may occur, blocking the capillaries.

Coma may come on suddenly or develop gradually during a paroxysm of fever; death usually occurs with symptoms of cardiac insuffiency and the end may come suddenly or unexpectedly; the limbs are usually relaxed but irritative motor symptoms occur.

Previous history helps to make a diagnosis, but usually an examination of the blood is necessary. This disease may be mistaken for cerebral apoplexy, sunstroke and uremia. The prognosis is always grave. In the treatment quinine is given hypodermatically in large doses.

Drs. Tefft, Rienhoff, Dewey, Terry, Ralston, Smith, Patterson, Watson, Barnes, Woody and Coffelt discussed the paper.

SPECIAL MEETING MAY 15TH.

The Society instructed the delegate to vote for the medico-legal committee in State Association.

In the "Post-Graduate Course," Dr. W. M. Smith gave a lecture on "Preventive Medicine."

MEETING OF JUNE 5TH.

Dr. J. E. Tefft gave a lecture on "Fractures," in the "Post-Graduate Course."

MEETING OF JUNE 12TH.

Dr. Ralston, of the Library Committee, reported that the Society had already received an addition to our Library from The Journal of the State Medical Association, and were expecting more books from St. Louis which would make us a library of several hundred volumes and necessitate more room. The society voted to move the library to more commodious quarters in the Carnegie Library Building.

The subject for discussion was "Feeding and Care of the Infant." Dr. Barnes opened the discussion and was followed by Drs. Smith, Cox, Ralston and Boyd.—J. L. ORMSBEE, M. D., Secretary.

HENRY COUNTY MEDICAL SOCIETY.

The Henry County Medical Society met on Wednesday, June 24th. Members present: Drs. Britts, Blackmore, Beaty, Berry, McNees, Shankland, Peelor, Kunkler, Derwent, Gibbons, Haire and Grady.

Dr. J. W. Berry reported an interesting case of a man aged 45 years. The case ran an acute course, with symptoms of intense headache and earache, cough, expectoration, and vomiting, and died within forty-eight hours.

Dr. T. A. Blackmore presented a patient, a boy of 8 years, who had passed through a severe siege with typical symptoms of pneumonia, at first, and later developing pleuritis and an abscess. The patient made a good recovery and gained 25 pounds.

Dr. W. H. Gibbons related a case of pleuritic effusion in a boy of 7 years. Resection of a rib was followed by complete recovery.

Dr. E. C. Peelor reported a case of hip joint trouble that was relieved by extension.

Dr. R. D. Haire made a report of the annual meeting of the State Association and stated that much good work had been accomplished, particularly the establishment of a defense fund for protecting the members against civil malpractice suits.—F. M. DOUGLASS, M. D., Reporter.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY.

The Lawrence-Stone County Medical Society met at Aurora, June 3rd. It was apparent at opening that attendance would not, on account of interest in the State Association meeting just closed, the American Medical Association then in session and other society meetings, be up to the average nor the program attract so much interest.

Dr. Madry, as delegate, made a report of the work done by the House of Delegates of the State Association.

The President, Dr. D. M. Huffman, delivered his address to the society. This address was one calculated to spread the cement of brotherly love and to beckon to a higher plane of ethics and professional usefulness.

Dr. J. A. Harris was called to present his paper, but asked to be excused from reading the paper assigned him on account of a misunderstanding. He delivered a talk on the suggestions in the President's address, giving admonitions and advice in keeping with the spirit of the address. He thought the medical profession ahead of everything on earth for doing good to our fellowmen, though our individual usefulness was often crippled by unkind remarks, unjust criticism and evil words, when spoken by a brother. The nobility of the profession should prompt us to nobler deeds and words to and for each other.

In an informal discussion of things pertaining to the general interest of the society, the Secretary suggested that a program be planned for a year in advance. This met with as much opposition as support, members of the program committee being found on both sides of the proposition. Dr. Fleming offered as a solution to the problem, that a little more activity be injected into the committee; this he thought would insure all the success that could come to the Society from the make-up of the program and the attendance of those appointed to read papers.

On motion the Society adjourned to meet at 1:30 p. m.

AFTERNOON SESSION.

Dr. E. E. Goodrich read a paper on "The Alkaloidal Treatment of Appendicitis." The doctor advocated the use of calomel followed by a saline laxative, after which he administered hyoscyamine. He thought better results had been obtained by this plan of treatment than by others. Dr. Huffman in discussing the paper said he had had experience with between thirty and forty cases in which hyoscyamine had been used, and all except three had recovered without surgical interference. He first flushed the bowels, if called early, with a saline laxative; if called late he employed warm enemata to flush the colon and relieved the pain with opiate until he could get the physiological effect of hyoscyamine.

Dr. Harris in opening the general discussion, said the treatment did not appear to be altogether alkaloidal, as calomel and salts were used in the beginning and other agents were also used in the treatment; that the majority of cases got well if left alone. He had no confidence in medical treatment and believed the time to operate was when a positive diagnosis had been made; that more of the cases should be treated surgically. He

did not believe a saline laxative should be given as salts were too much disposed to balloon the bowels. He preferred calomel, followed by castor oil.

Dr. Terry said the theory was that appendicitis was a surgical disease and whether to operate or not depended upon whether or not the diagnosis was made out as catarrhal. He advised operative interference in all forms except the catarrhal, but admitted that probably all kinds usually started as catarrhal. He noted the difficulty in making a differential diagnosis in most cases, but said the catarrhal was much the most frequent form and tended to recovery. He was not in favor of operation during the acute stage, and stated that mistakes would be made if we always operated, but perhaps less if we never operated. He considered operations dangerous on account of the morbid anatomy resulting from the adhesive inflammation. He followed Ochsner in allaying vomiting and relieving pain by washing out the bowels and, in suitable cases, the stomach also, withdrawing all food which leaves considerable residue. Dr. Goodrich's plan he considered a good one but whether or not to give a cathartic would depend on the individual case.

Dr. Fleming stated that the class of cases that demanded operation during the acute stage recorded a high mortality. He agreed with Dr. Harris that we ought to be ready to operate at any time, but disagreed as to operation always as soon as a diagnosis had been made. He advocated operating after the acute stage had passed.

Dr. Madry believed it a surgical disease but did not consider operation necessary in most cases. He thought all agreed as to surgical treatment but that each spoke of a particular stage or kind and under ideal conditions. We have to take the cases as we find them and do what in our judgment we believe best to be done.

Dr. Huffman said that early in the attack the condition would be ideal for operation but should this time pass, the consent of the patient ought to be obtained to operate soon after.

Dr. Terry wished to say further that he was in favor of an early operation if the condition was ideal. He considered that within the first twenty-four hours was a good time but from forty-eight hours to six days was the most dangerous and the most troublesome period for an operation, and was marked with greatest mortality; this he regarded as due to the adhesions and infiltrations.

Dr. Goodrich in closing said his locality demanded medical treatment first; that the profession was divided as to whether the bowels should be opened or locked up; he was taught to "lock up."

Dr. Miller reported two cases of parotitis complicating typhoid fever, and Dr. Shelton two cases occurring in a family of five, all of whom were convalescing from typhoid fever. All the cases went on to suppuration and were treated symptomatically. All recovered.

It was voted that the next meeting be an open meeting to which the public be invited and that it be held at Aurora.—A. H. Madry, M. D., Reporter.

MONITEAU COUNTY MEDICAL SOCIETY.

The regular meeting of the Moniteau County Medical Society was held at Tipton, June 11th, with an afternoon and evening session.

The members present were Drs. J. M. Robertson, H. Freudenberger, J. H. Lang, G. S. Wilson, J. P. Burke, W. R. Patterson, J. B. Stewart, J. B. Norman, S. H. Redman, J. W. Marsh and L. L. Latham. Visitors present: Drs. Harry Marsh, W. H. Reynolds, W. H. Elliott, John Taylor and R. O. Reser.

The regular session was held in the afternoon. Dr. Harry Marsh read a paper on epilepsy. Dr. J. B. Burke reported a case of peritonitis. Dr. J. M. Robertson and Dr. J. W. Marsh each presented a clinic.

The evening session was held at the Baptist church and was open to the public. Dr. S. H. Redman read a paper entitled "Tuberculosis a Communicable Disease," and Dr. J. B. Norman followed with a talk on "Society's Responsibility for Consumption." This meeting was well attended by the citizens, who manifested great interest in learning the best methods of precaution in preventing the spread of the "White Plague."

The next regular meeting of the Society will be held Thursday, September 10th, at Tipton.—W. R. Patterson, M. D., Secretary.

MONROE COUNTY MEDICAL SOCIETY.

The Monroe County Medical Society enjoyed an interesting session at a special meeting held in Paris, May 14th, the following members being present: Drs. Southern, T. B. Loyd, W. B. A. McNutt, F. M. Moss, D. McGee, C. H. Dixon, J. E. Brown, H. C. Payne, G. H. Cassity, M. E. Leusley, J. C. Maddox, H. G. Schobe, M. C. McMurry, J. A. Furnish, G. M. Ragsdale, W. T. Bell. There were also present visitors from without the county, Drs. M. W. Meyer and G. L. Noyes, Columbia; H. C. Vaughn and B. F. Singleton, Shelbina; D. C. Gore, Marshall; J. C. Chilton, Hannibal; T. A. Roselle, Palmyra; G. A. Johnson, Moberly; M. B. Austin, Brunswick; J. Q. Cooper, Rowena, Mo.

Dr. D. C. Gore read a paper on "The Doctor as a Citizen." The paper was well prepared and full of interesting points for discussion.

The paper by Dr. Roselle on "Diabetes in Children" was well received. The importance of more frequent examinations of the urine was emphasized, and several cases reported.

An interesting talk on the subject of "Extrauterine Pregnancy" was made by M. W. Meyer, illustrated by pathologic specimens.

Dr. Cassity read a paper on "The Home Treatment of Consumption." The importance of the open air treatment and rest during the febrile stage was urged.

At the conclusion of the above program the last, but not least enjoyable, feature of the day was the banquet which was followed by the usual flow of oratory.

Next regular meeting will be held at Paris, July 7th, at 2 p. m.—W. T. Bell, M. D., Secretary.

PLATTE COUNTY MEDICAL SOCIETY.

The Platte County Medical Society met in Platte City on June 3rd, with the following members present: Drs. Swaney, F. M. Shafer, Coffey, Mizener Naylor, Herndon, Redman and Clark.

Dr. Clark read a paper on "Artificial Feeding of Infants," which was illustrated by a chart. The subject was freely discussed by all present and many points of interest were brought out. Motion made and seconded that Dr. Clark read his paper before the Clay County Medical Society, which meets at Smithville.

The Society adjourned to meet again next month.—F. M. Shafer, M. D., Secretary.

STE. GENEVIEVE COUNTY MEDICAL SOCIETY.

The Ste. Genevieve County Medical Society held its regular monthly meeting June 10th.

The application of Dr. F. M. Vessels, of Perryville, for membership, was presented and on motion rules were suspended and he was made a member by acclamation.

No further business appearing, the Society adjourned until the second Wednesday in July at 7 p. m.—R. W. Lanning, M. D., Secretary.

ST. JOSEPH-BUCHANAN MEDICAL SOCIETY.

Regular meeting Wednesday, May 13, the president, Dr. H. S. Forgrave, in the chair.

Drs. J. H. Lewis and C. W. Bertram were duly elected to membership in the Society.

Dr. Kenney, chairman of committee on investigation, asked for further time, which upon motion, was granted.

Dr. Campbell, a member of the committee, expressed his readiness to do his full duty at any time he was called.

The Secretary then read the instructions to the state delegates outlining the measures which they were to favor at the meeting in Springfield.

Dr. Campbell referred to the presence in this country, of Prof. Martin, of Berlin, and expressed a desire to have him visit St. Joseph as the guest of the local Society.

After some discussion, a motion prevailed to the effect that the Society extend a cordial invitation to Prof. Martin, through Dr. Campbell, to visit this city, and that a committee of five be appointed to make arrangements for his reception.

The chair appointed Drs. Campbell, J. Geiger, Fassett, Todd and Woodson.

Dr. Kenney presented a case of lupus vulgaris, treated by the Finsen light.

Dr. E. H. Bullock presented the paper of the evening, "Shall we have a Department of Health and Medicine," which was well received.

Discussed by Drs. Kenney, Wallace, Fassett, Leonard, Ferguson, Campbell.

Dr. Kenney offered a motion that we instruct our delegates to introduce a resolution in favor of a Department of Public Health at the State meeting. Carried.

The secretary was instructed to send a copy of the paper, with the endorsement of the Society, to the secretary of the "Committee of One Hundred" recently appointed by President Roosevelt.

At this hour the Society took an adjournment to the dining room, where a "Dutch lunch" was in waiting. President Forgrave occupied a seat at the head of the table, and after the good things had been disposed of, called on the various members for short talks on the "Good of the Order." Those who responded were: Drs. O. G. Gleaves, C. H. Wallace, W. L. Kenney, Fassett, Owen, Campbell. Number in attendance, 37.

SCHUYLER COUNTY MEDICAL SOCIETY.

The Schuyler County Medical Society met in Lancaster, May 5th. The following members were present: Drs. J. B. Bridges, J. H. Keller, W. F. Mitchell, E. L. Mitchell and H. E. Gerwig; visitor, Dr. Pearle Heart, from Putnam County.

Dr. J. B. Bridges read a paper on "Hemophilia." Dr. W. F. Mitchell read a paper on "County Medical Organization." Both papers were discussed by all members present.

Election of officers: Dr. E. L. Mitchell was re-elected president; Dr. J. B. Bridges, vice-president; Dr. H. E. Gerwig, secretray and treasurer.

The next meeting will be held on August 11th, 1908, at Lancaster.—H. E. Gerwig, M. D., Secretary.

SHELBY COUNTY MEDICAL SOCIETY.

The Shelby County Medical Society met in Shelbyville.

Dr. Carson reported as delegate to State Association.

Dr. Dallas reported a case of goitre, which brought out a good discussion of the various forms and treatments of this disease.

Dr. Pollard presented a patient on whom he had recently operated for pterygium with excellent results.

Dr. White, candidate for representative, gave a talk on the "Local Option Law," which he advocated strongly.

Dr. Wood read a paper on "The Present Knowledge of Opsonins," which was commented on and discussed by all.

Dr. Dallas made a plea for all members to subscribe for the Journal Americal Medical Association.

This was an excellent meeting; discussions were full and free. Dr. Owen said it gave him "a feelin' down deep in his heart" for the Society, for physicians, and for medicine in general.

The following members were present: Drs. Smith, Pollard, Vaughn, Owen, Devin, Carson, Maupin, Dallas, White and Wood.—A. M. Wood, M. D., Reporter.

WEBSTER COUNTY MEDICAL SOCIETY.

The Webster County Medical Society held a public meeting on June 10th, having previously issued programs which were sent to all doctors in the county. The public was invited to attend the meeting and the object of such meetings was explained to them, viz.: that we desired to get in closer touch with the public and instruct them in sanitary and preventive medicine; and calling upon all interested to attend and help us in the great work of furthering such measures in our county.

We had an afternoon and evening session at which the following papers were read and discussed:

School Sanitation.....Dr. W. R. Beatie
Corneal Ulcers and Their Treatment.....Dr. T. A. Coffelt
The Duty of the Public to Their Family Physician.....
.....Dr. Chas. H. McHaffie
The Needed Coöperation of the Medical Profession and the Public..
.....Dr. B. T. Cantwell
The State Medical Practice Art.....Attorney J. E. Haymes
Our State Sanatorium for Incipient Tuberculosis.....Dr. E. Trimble

The meeting was well attended by the people of Marshfield and surrounding towns, and good interest was manifested in the program. Those present were invited to take part in the discussions and many responded, among whom was our representative in Congress, the Honorable Robert Lamar.

At the conclusion of the meeting steps were taken to organize an antituberculosis society for Webster County.

Our Society attended the Springfield meeting of the State Association and we are very much enthused.

We expect to take up the post-graduate work in our meetings hereafter.—W. R. Beatie, M. D., Reporter.

BOOK REVIEWS

SAUNDERS' FORTHCOMING BOOKS.

Messrs. W. B. Saunders Company, medical publishers of Philadelphia and London, announce for publication before June 30th, a list of books of unusual interest to the profession. They especially call the attention of our readers to the following:

Bandler's Medical Gynecology—Treating exclusively of the medical side of this subject.

Bonney's Tuberculosis.

Volume II, Kelly and Noble's Gynecology and Abdominal Surgery.

Volume IV, Keen's Surgery.

Gant's Constipation and Intestinal Obstruction.

Schamberg's Diseases of the Skin and the Eruptive Fevers.

John C. DaCosta, Jr.'s Physical Diagnosis.

Todd's Clinical Diagnosis.

Camac's Epoch-Making Contributions in Medicine and Surgery.

All these works will be profusely illustrated with original pictures.

Bier's Hyperemic Treatment in Surgery, Medicine, and the Specialties. A Manual of its Practical Application. By Willy Meyer, M. D., Professor of Surgery of the New York Post-Graduate School and Hospital, etc., and Professor Dr. V. Schmieden, Assistant to Professor Bier, of Berlin. Illustrated. Philadelphia and London. W. B. Saunders Co. 1908.

Bier's hyperemic treatment is one of the most remarkable and valuable contributions to modern therapeusis. This new method is extensively used all over Europe and is just beginning to meet its well deserved recognition in this country, due, to a very large extent, to the efforts of Dr. Willy Meyer, of New York. The technique of the Bier treatment in general is simple enough, but the results are greatly dependent upon the exactness with which the method is applied in the individual case. The profession of the United States may feel grateful to one of the most enthusiastic and successful exploiters of Bier's method for publishing this volume, which presents in complete but concise form, the principles, various methods, indications and contra-indications of artificial hyperemia in the treatment of special diseases.

Practical Life Insurance Examinations, with a Chapter on the Insurance of Substandard Lives. By Murray Elliott Ramsey, M. D. J. B. Lippincott Company, Philadelphia and London.

This is a very concise, interesting and instructive little book of 230 pages, yet large enough to cover the whole field clearly and practically. Special attention has been given to diagnosis and prognosis of diseases in the vital zone. The up-to-date views of the author upon heredity and causes of diseases are of supreme importance to every painstaking examiner. A valuable as well as interesting feature is the chapter on insurance of substandard lives; a close study of this will fully recompense for the price of the book.

The volume meets the needs of the life insurance examiner who desires to do the very best by the insurer as well as the insured.

Urogenital Therapeutics: Medical and Surgical. By Filipp Kreissl, M. D., Chicago. Cleveland Press, 1908.

This little volume will appeal to that class of practitioners who do not care to review the whole history of the treatment of a given malady to find what the author considers the best course to pursue. It is concise, systematic and practical. Most of the 149 illustrations are good and the marginal index is a great convenience for reference work.

Manual of Clinical Chemistry. By A. E. Austin, A. B., M. D., Professor of Medical Chemistry and Toxicology in the Medical Department of Tufts College, Boston. D. C. Heath & Co., Boston.

This book was written to cover practical chemistry of the body. "It takes the student from the elements of the body, through their various stages of combination, to the finished product, man; it shows how this combination takes place and how its progress is sometimes interrupted." To the physician it offers an interpretation of laboratory findings in such a manner that he learns quickly, not only that a result presages a condition, but why it does so.

Osler's Modern Medicine. Its Theory and Practice in Original Contributions by American and Foreign Authors. Edited by William Osler, M. D.; Regius Professor of Medicine in Oxford University, England, etc., assisted by Thomas McCrae, M. D., Associate Professor of Medicine and Clinical Therapeutics in the Johns Hopkins University, etc. Volume IV. Illustrated. Philadelphia and New York, Lea & Febiger. 1908.

The fourth volume of this work consists of three parts, dealing respectively with Diseases of the Circulatory System, Diseases of the Blood and Diseases of the Spleen, Thymus and Lymph Glands. From the pen of the distinguished editor we have the following chapters: Acute Endocarditis, Diseases of the Arteries and Aneurysm; also part of the chapter on Diseases of the Valves of the Heart, written conjointly with Alexander G. Gibson; the latter also contributes chapters on Hypertrophy of the Heart, and Insufficiency and Dilatation of the Heart. Among the other contributors to this latest volume we find Ch. F. Hoover, A. McPhedran, Robert H. Babcock, Maude E. Abbott, G. Blumer, Alfred Scott Warthin, Richard C. Cabot and I. P. Lyon.

The volume contains over 850 pages and in every respect preserves the high standard set by the preceding volumes of this remarkable work.

Nervous and Mental Diseases. For Students and Practitioners. By Charles S. Potts, M. D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia. New (second) edition, thoroughly revised and greatly enlarged. In one 12mo. volume of 570 pages, with 133 engravings and 9 full-page plates. Price, cloth, $2.50 net. Lea & Febiger, Publishers, Philadelphia and New York.

It is obvious that in a comparatively short manual these subjects cannot be discussed exhaustively. However, the author has treated them in a concise and lucid manner; has given the disease-pictures clearly and well defined; has made the diagnostic and differential-diagnostic points plain and convincing; and finally, has referred only to the really worthy therapeutic measures, omitting a great many customary but problematical ones. For all of these reasons, and not the least because of the fluent and choice diction, the perusal of the manual will afford the reader both pleasure and instruction. W. R.

JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume V AUGUST, 1908. Number 2

ORIGINAL ARTICLES

PERSONAL OBSERVATIONS IN THE PATHOLOGICAL ANATOMY OF THE GALL-BLADDER AND BILIARY PASSAGES.*

BY WILLARD BARTLETT, M. D., SAINT LOUIS.

A rehash of text book pathology which might enlighten a medical school class would surely be out of place here. The gentlemen whom I am addressing are all of them in a position to read everything that is at my command, hence I cannot hope to add to the sum total of our common knowledge in any other way than by epitomizing my own recent observations on the manifestations of disease in the gall bladder and biliary passages.

In the course of a thousand autopsies which I performed some years ago, I noted carefully when gall-stones were found the conditions present in various parts of the body but find nothing in those notes that cannot be read in every text book on morbid anatomy, hence do not feel that I should be justified in taking up your time with a recital of the same.

The live issue of the present day is pathological anatomy as met with in the operating room, hence I have undertaken a critical study of the unusual conditions met in eighty-one recent consecutive cases operated upon by me. I have not confined myself strictly to cases in which gall stone disease was found but have included a few others which manifested very similar symptoms and which may be amenable to similar treatment.

Of these eighty-one patients, one was not operated upon and five were so treated secondarily, hence they will not be included in my classification. Four of these secondary procedures were undertaken for the relief of adhesions and in one a gastroenterostomy was done for obstruction due to the same cause. We have left then, seventy-five primary operations for our consideration.

Seventy per cent. of these patients were females, as might be expected. Apparently pregnancy is the determining factor in this direction. A woman who has borne several children is likely to acquire a

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

relaxation of the abdominal wall which permits the liver to drop down and forward, kinking the biliary passages and producing stagnation; thus we have present one of the two factors without which gall stone formation is not possible, namely stagnation and infection. This will be referred to later. However, some of my patients were unmarried women who had never borne children. Thirty per cent. of them were men. Practically all adult ages were represented.

In 74 per cent. of my patients gall stones were present. Some might have expected them in 100 per cent. where the diagnosis was correct, however, it must be taken into consideration that the presence or absence of calculi in gall stone disease is really of secondary importance. They are merely one of the results of stagnation and infection of the biliary passages, just as are diseases of the gall bladder wall and adhesions; they may not form at all. The Mayos say (in a personal communication) that they are only seen in milder forms of disease but never produced in a very serious infection. I will not go further into the chemistry of this subject since it would take us to great lengths and you can read it in any text book.

In one of my cases there was a most interesting reason why no gall stones were present, namely, the man had passed them all and at the operation the gall bladder and duct while thickened and inflamed were empty. However, drainage cured permanently the symptoms which had persisted up to the time of the operation.

There has been the greatest variety in number and size of the stones which we have removed, from a single stone the size of a hen egg up to many hundred of the tiniest concretions, there has been an infinite variety. In addition to the ordinary pigment and amorphous cholestrin stones, I have removed one pure crystaline cholestrin concretion and one double stone, the larger portion of which consisted of these pure crystals while the rest was a mass principally of bile pigment.

The wall of the gall bladder was found to be diseased in 65 per cent. of these cases. In every instance but one this change was of an inflammatory nature, the single exception being cancerous. There were many distended bladders which are not referred to as diseased. Frequently this distension was so great and of such duration as to have caused considerable atrophy of the liver tissue in front of the offender. Many of these thickened, chronically inflamed gall bladders were so tightly wrapped in adhesions between liver, omentum, stomach, duodenum, colon and abdominal wall that it was with the greatest difficulty that the little sack could be found at all. These very gall bladders were in many instances greatly shrunken and retracted far back under the liver and in addition found to be extremely friable and otherwise hard to handle. In one instance the entire gall bladder was covered with fresh fibrin and itself gangrenous. This was, however, fortunately removed before rupture had taken place. In one instance a stone could be seen beneath the surface of the peritoneum covering the gall-bladder, having perforated

all the other coats. In two of these patients a complete perforation had taken place before the operation and stones were found free in the abdominal cavity. In one instance a very large solitary stone had perforated from the gall bladder through the wall of the duodenum and had passed a short distance down the small intestine which it had then completely obstructed. This patient with a history of twenty years of gall stone disease was operated upon after one week of obstructive symptoms, these constituting a perfectly new phase in an otherwise clear record of gall-stone disease. In several of these patients the mucous membrane of the gall bladder was so encrusted with calcareous material as to necessitate either its removal or the removal of the gall bladder in its entirety.

In accordance with the law of Curvoicier, I have with one single exception found the gall bladder contracted where there has been a stone in the common duct. As is well known this is due to the fact that a chronically inflamed bladder wall has the tendency to contract and this tendency becomes manifest whenever a portion of its contents is expelled, as for example after stones have slipped out into the common duct or intestine. In the one instance referred to I removed from the common duct the largest stone which has ever been recorded in this situation, measuring about four inches in length and nearly two inches in diameter. In spite of this the gall bladder was distended and tightly filled with many hundred smaller concretions.

In No. 23 of my series, in addition to stones in the thickened gall bladder, there was a nodule in the anterior surface of the liver about two inches away which resembled a metastatic cancer as frequently seen. The patient was a man of twenty-five but in spite of his age a bad prognosis was given; however, after more than a year his health is vastly better than before the operation, hence the gall bladder nodule can scarcely have been of a cancerous nature.

In No. 59 of this series a typical atrophic cirrhosis of the liver accompanied gall stone disease. No doubt they were perfectly independent processes running a parallel course, although we are well aware that in some instances infection of the biliary passages of the liver leads to an increase in connected tissue around them with consequent shrinkage of the same.

The cystic duct was obliterated in 16 per cent. of my cases. On the operating table it is very difficult to ascertain whether or not it is patent unless it be cut in two and actually studied outside the body.

The fact that bile does not appear in the gall bladder during the course of an operation is no evidence that it may not come later. Where drainage is needed, preparation should be made for it since bile may not appear for a week after the gall bladder is opened, as occurred in one of my cases. In another instance where the cystic duct was obliterated I found empyæma of the gall bladder which had resulted from a previous operation undertaken in the mistaken notion that gall stones

were present. In one patient hydrops of the gall bladder was present as a result of intermittent closure of the duct, due to the presence of a small stone which acted as a ball valve. This would allow bile to enter the bladder but none to escape and in consequence the well-known exchange of materials took place between the mucous membrane of the bladder and the bile which it contained, a gradual absorption of biliary salts and bile pigment going on while mucus was secreted in turn.

The common duct was obstructed in 25 per cent. of these cases, however, it must be taken into consideration that five of them were instances of cancer of the pancreas. When they are subtracted this leaves 18 per cent. in which the entrance of bile into the intestine was prevented by the presence of a stone. It may be said in general that the common duct dilates and its walls become thickened behind a stone. Such a duct should be regarded as suspicious especially in view of a history of jaundice. Obstruction of the common duct in 18 per cent. of my cases will show that this is much more common than one would suppose from the number of operations that are performed in which little attention is paid to it. In only one instance did I find a stone in the common duct with none in the gall bladder, although there is no reason why a small solitary stone might not pass down and obstruct this tube. In one undoubted case of stone in the common duct the patient was in so critical a condition at the operation that drainage was instituted and the obstruction in the duct left behind. She did beautifully for six months when she had a violent attack of colic, passed the stone in the duct and has been perfectly well ever since. Immediately after its passage her external fistula closed for the first time since the original operation. In another instance a stone in the common duct was pressed into the duodenum during the attempt at its removal, naturally with a perfect result. In the cases where the duodenum was obstructed by a tumor of the pancreas it may be stated with propriety that an anastomosis was made in one instance between the gall bladder and the duodenum, in another between the structure and the stomach, while in a third the stagnant bile was disposed of through an external fistula. A later number in this symposium will no doubt deal with the relative merits of these procedures.

In 4 per cent. of my cases pancreatitis was present. In two the immensely enlarged pancreas could be palpated before and after the abdomen was opened. In another operated upon only about a week ago a stinking fluid gushed out as soon as the abdomen was opened and areas of fat necrosis were seen in the neighborhood of the pancreas, explaining the origin of the fluid. The patient was exceedingly sick as might be imagined but is rapidly improving under the influence of drainage.

Pyloric adhesions were present in 29 per cent. of my patients and these I regard as being of more than passing interest. No doubt the stomach symptoms are in many of our patients explained by the

crippling which results from these adhesions. The organ cannot empty itself properly and dilates sometimes to a surprising extent. These are just the cases for acute post-operative dilatation of the stomach which we well know occurs with alarming frequency after operations for gall stone disease. In three such patients the obstruction was so complete that I had to do a gastroenterostomy for its relief, twice at the primary operation and once secondarily.

The appendix showed evidences of disease and was removed in 26 per cent. of my cases. This I consider to be a relatively high per cent. but can assure you that an examination of this member will probably result in quite similar statistics in the hands of all who take the trouble to examine it regularly. We never fail to look at it unless the patient's condition forbids or if infectious material will not be spread by so doing. In a few instances the appendix has been found full of pus, being no doubt a greater menace than the biliary region with its stones. In two instances I have seen gall stones in the appendix itself.

In 15 per cent. of my cases I found gall stones while operating for other diseases correctly diagnosed. I cannot give correct data regarding the number of these patients in whom the presence of gall stone disease had been suspected in advance but I must admit that quite a number were purely accidental findings. However, in every one I took occasion to go more deeply into the patient's history after the operation and must state the gall stone disease could have been diagnosed in every instance where they escaped attention. I am not a believer in the theory of gall stones remaining latent through a long life and producing no symptoms, it is simply a case of bad observation and worse diagnosis where the patient comes to autopsy and they are found though never suspected in life. If possible we always make a second incision after completing the original work in such a case, and attend to the gall bladder region at the primary operation if the patient's condition permits it. To give an idea of the extent of disease revealed by some of these operative procedures, I will relate a few of the manipulations which we have undertaken in addition to treating gall stone disease in the same patient at one operation.

Gastro-enterostomy for duodenal ulcer.

Excision of both tubes in pyo-salpynx.

Implantation of silver filigree in post-operative hernia.

Internal Alexander operation and appendectomy.

Removal of ovarian cyst and appendix.

Removal of right tube and ovary for tubo-ovarian abscess.

Appendectomy and implantation of filigree for post-operative hernia.

Appendectomy and Mayo over-lapping operation for abdominal hernia.

Hysterectomy for fibroid.

Appendectomy, removal of right intraligamentus cyst and left hydrosalpynx.

These complicated procedures are not to be considered as ill-advised; where a well trained operating personnel work together they are accomplished within the most conservative time limit. Only one of those which I have recorded took an hour.

In one instance, which is of extreme rarety, an abscess of the liver ruptured into branches of the hepatic ducts and was drained through the gall bladder. I simply cite the case as one of the unusual things which can come up in surgery of this kind.

One of our most interesting cases was in a woman of thirty-five, three months pregnant, who had a gall bladder full of stones and firm pyloric adhesions. She vomited constantly for several days preceding the operation but ceased immediately upon the emptying of the gall bladder. It is of interest to note that she did not abort.

One patient with a stone in the common duct coughed so much after the operation that on the eighth day the entire wound broke down and when I got to the hospital I found most of the small intestine and the omentum lying out on the abdominal wall. She was closed again with a number of through and through stutures and went on to perfect convalescence.

I have tried to depict faithfully a number of immediate and remote morbid conditions as they have presented themselves in eighty-one cases recently. There can be no better way to lay before the surgeon the difficulties which he is likely to encounter in work of this kind. In no department of surgery are greater demands made upon the judgment of the operator. I have merely called attention to the morbid pictures which are to be expected. Another speaker will show what a variety of therapeutic measures are here applicable. Success in this class of surgery is above all a matter of adapting the latter to the former. When the operator has learned to do this the surgery of the biliary passages resolves itself largely into a question of manual dexterity.

The Prognostic Value of Blood Pressure in Pulmonary Tuberculosis.—A. B. Marfan (*Rev. de médecine,* November, 1907).—In pulmonary tuberculosis the blood pressure is usually low. In those cases, however, in which it is high, we can make, according to Marfan's investigations, a good prognosis. Such a finding means that the tuberculous process is on the high-road to a clinical cure. He has found hardly any exceptions to this rule and believes that the behavior of the blood-pressure gives us our most trustworthy prognostic information in pulmonary tuberculosis. A very low blood-pressure is of ill omen and indicates a rapidly progressive infection. This rule has however more numerous exceptions than its converse; a low blood-pressure does not always exclude the possibility of a cure. In his blood-pressure work, Marfan used the Potain sphygmomanometer applied to the radial artery with the patient in the seated posture.—*(Interstate Medical Journal.)*

SYMPTOMS OF GALL STONE DISEASE.*

BY ROLAND HILL, M. D., C. M., ST. LOUIS, MO.

The symptoms of cholelithiasis present many distinctive characteristics as a result of inflammatory changes in the gall bladder itself, the ducts or in the surrounding structures. It is a well known fact, established by a large series of post mortem examinations, that many patients afflicted with this disease go through life without ever being conscious of their trouble, as the calculi simply lie inert in the gall bladder and never give rise to any symptoms whatsoever.

A careful estimate has shown that approximately one person out of every ten will present evidence of gall stone disease at post mortem examination, while during life it is probable that not more than 15 per cent. of those afflicted are conscious of their disease.

In elderly women gall stone disease is very prevalent and one extensive series of post mortem examinations showed calculi to be present in one case out of every four of those examined.

As gall stones differ greatly in size and in location, it is but natural that the symptoms arising from their presence will depend upon many different factors.

Thus stones in the gall bladder, or cystic duct, will give rise to a somewhat different class of symptoms from calculi of the same size in the common or hepatic duct.

Likewise cases attended with severe infection will vary greatly in character and danger from those associated with only the milder degrees of inflammation.

The ordinary, primary, classical attack of gall stone colic is caused by a calculus in the gall bladder passing down into the common duct, or duodenum, or attempting to pass through the cystic duct, and being regurgitated into the gall bladder.

In a case of this kind the patient is seized suddenly with the most intense pain in the epigastric, and right hypochondriac regions. This pain is of the most intolerable character, and often times produces a severe collapse. The patient sweats profusely and the surface of his body is cold and clammy. The pain is paroxysmal in character, and in an average case lasts from three to twelve hours.

It may cease suddenly as the result of the escape of the stone into the duodenum. The temperature is elevated to a slight or moderate degree. Reflex vomiting is usually present, and the vomited matter consists of the contents of the stomach and bile that has been regurgitated from the duodenum.

The region of the gall bladder becomes decidedly tender. This tenderness is particularly noticeable just below the cartilage of the ninth

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rib, or on a line between that point and the umbilicus. The liver may be swollen and tender, and if the cystic duct becomes obstructed the gall bladder may become enlarged so as to form a distinctly palpable tumor. During an attack of this character the pulse is small and feeble, but usually about normal in frequency. An examination of the blood may show a more or less marked leucocytosis depending upon the degree of inflammation that has been excited. Albumen or sugar may occasionally be found in the urine, as a result of the severe disturbance of the nervous system.

Indican as a rule is not present in the urine in gall stone disease. Bile pigment is, however, found in the urine in common duct cases before jaundice appears. These facts are of importance in distinguishing between obstruction of the common duct from gall stones and intestinal disturbances as appendicitis or intestinal obstruction. Where the calibre of the common duct becomes lessened as a result of inflammatory changes in the mucous membrane, or from calculi, the stools may be more or less clay colored, depending upon the degree of obstruction. Where stones have passed through the duodenum they may be recovered from fæces, thus making the diagnosis positive. Jaundice in many of these cases is not present, or only very slight. About 80 per cent. of all ordinary gall stone cases are free from jaundice, and it may be but slightly marked or even absent with stone present in the common duct.

The foregoing is a description of the symptoms of a characteristic typical attack of gall stone disease, but in a large proportion of the cases that come under observation the symptoms are anything but typical and tend to confuse our diagnosis. The majority of the less typical cases of cholelithiasis are chronic in character and present obscure symptoms, of which the most prominent is a so-called indigestion. This is due to a certain degree of inflammation of the gall bladder and ducts. In many of these cases stones will have become fixed in the cystic or common duct. At times cancerous changes supervene as the result of long continued irritation. It has been estimated that these malignant changes take place in approximately 4 per cent. of all of the cases of gall stones that have given rise to irritation.

In some acute cases the inflammation is so severe as to lead to pus formation with constitutional symptoms varying from a moderate pyrexia to a most pronounced septicaemia.

Pus cases occur where the intense pain will cease suddenly while the patient's condition becomes aggravated as a result of gangrene of the gall bladder.

In other cases a perforation of the gall bladder or ducts may lead to a general peritonitis, or to the formation of a fistulous opening between gall bladder and bowel. In these atypical cases where secondary changes have taken place, and other structures have become involved the diagnosis may at times be exceedingly difficult. The one constant symptom in these cases is usually associated with tenderness. This

pain may be either localized or referred. Localized pain is of a nature of a dull ache in the region of the gall bladder. If the pain is the result of impacted stone it is severe and prolonged. Tenderness in these cases is marked over the region of the gall bladder and also over the posterior surface of the liver. This posterior tenderness, if well defined, extends laterally from near the spines of the vertebra to the posterior axillary line, and vertically from the tenth dorsal to the first lumbar spine.

The referred pain usually present radiates to the scapular region of the right side, to the epigastric region; to the neck and down the arm.

In certain cases, especially with obstruction of the cystic duct a gall bladder becomes distended as a tumor and can be readily palpated. These patients are not usually markedly jaundiced. If the gall bladder becomes greatly distended, associated with a decided and rapidly increasing jaundice it is in a majority of cases due to pressure on the common duct from without; usually from malignant disease of the pancreas.

Cases of cholelithiasis with calculi in the common duct, while presenting many symptoms similar to those of involvement of the gall bladder and cystic duct still present certain distinctive characteristics that demand special mention.

Obstruction of the common duct from stone may be partial or it may be complete. It is more likely to be partial than complete, and may be due to one stone or to a number. Stone in this region usually gives rise to persisting jaundice of a more or less marked character. It is attended with pain diffused over a considerable area. This pain is liable to acute exacerbations, attended with rigors, nausea and vomiting, and usually an increase in the degree of the jaundice.

The temperature in these cases is quite characteristic; it will go suddenly to 103 or 104 and then quickly subside. At the time of an attack the liver is enlarged and tender. Bile in these cases of partial obstructions enters the duodenum in small quantities. This is decreased after a paroxysm, and its absence may be noted in the stools. These cases are attended with a good deal of emaciation and a great deal of gastric disturbance.

Gall stone disease with secondary chronic changes may be readily mistaken for a number of other conditions in this region that present symptoms of a similar character.

Gastric or duodenal ulcer may in certain cases so closely resemble gall disease that a diagnosis will be impossible. Usually, however, a diagnosis may be made by a careful study of time of attack in connection with the taking of food.

In gastric ulcer the pain comes on immediately after taking food and in duodenal ulcer an interval of about two hours will elapse until food begins to pass into the duodenum. Gall stone colic on the other hand comes on at more irregu[illegible] ot so intimately asso-

ciated with the time at which nourishment is taken. The pain in gall stone disease is more definitely defined in the gall bladder area, and after an attack is over it may not occur again for a long period of time.

The pain in gastric ulcer is more defined in the region of the stomach and an examination of the stomach contents will usually show an excess of hydrochloric acid. In a small percentage of cases of gastric ulcer the patient will suffer from hemorrhages more or less severe.

Another lesion often mistaken for gall stone disease is appendicitis. This mistake is particularly liable to occur where the gall bladder is inflamed and distended down into the appendiceal region. In cases of this character we have elevated temperature, pain, rigidity, tenderness and swelling right at McBurney's point.

I saw a case of this kind only a few weeks ago in which an enormously distended leaking, gall bladder was mistaken for an appendiceal abscess.

To differentiate an enlarged gall bladder from an appendiceal abscess is not usually very difficult if the case is seen early, as the point of first appearance of swelling will show the gall bladder gradually distending downward from the liver to the appendiceal region, while in appendicitis the abscess forms primarily in this site. In certain cases where the appendix and gall bladder may have become adherent a diagnosis will usually be impossible.

Pathological conditions of the right kidney may closely simulate and be mistaken for an enlarged gall bladder.

In floating kidney the tumor may be felt in the gall bladder region, and by palpation we may determine its shape and consistence. As a rule a floating kidney can be pushed back into the position normally occupied by the kidney. Gall bladder enlargements on the other hand are more superficial and their mobility is controlled largely by the movements of the diaphragm. In some cases it is possible to distinguish an enlarged kidney behind a distended gall bladder.

Certain growths of the kidney may project forward in hepatic region in such a way as to make the diagnosis a matter of conjecture.

Chronic syphilitic inflammation and the gastric crises of tabes may give rise to symptoms so closely simulating hepatic colic that a differentiation can only be made by a most careful examination of the patient for signs of syphilitic infection. Cases of this kind have been operated upon by careful and capable surgeons.

Acute and chronic pancreatitis are often secondary to gall stone irritation and a differential diagnosis is impossible.

Ovarian cysts projecting upward in the hepatic region may at times very closely simulate an enlarged gall bladder. In a very recent case of my own the patient had a uterine fibroid and a large tender mass extending down from the liver to McBurney's point. This was giving a great deal of distress, and almost convinced me that I was dealing with an enlarged gall bladder. Operation, however, showed that the

mass was an ovarian cyst with twisted pedicle displaced by the fibroid upwards in the site of the gall bladder.

Malignant involvement of the pancreas may cause pressure upon the common duct and obstructive jaundice.

It varies from the jaundice of cholelithiasis in that it comes on gradually and generally painlessly, and will deepen from day to day until the skin is of a deep greenish yellow. The greenish tinge in these cases is quite easily distinguished from the golden yellow jaundice resulting from gall stone obstruction.

In the foregoing description of the symptomatology of cholelithiasis, I have endeavored within the limited time alloted, to give a succinct description of this disease, as well as a brief review of its differential diagnosis.

In conclusion, I wish to emphasize particularly the following points:

First: That this disease is much more prevalent than is commonly suspected.

Second: That one of its most common symptoms is a so-called indigestion or bilious attack associated with pain and tenderness in the epigastric and right hypochondriac regions.

Third: That the majority of cases of gall stones are not accompanied by jaundice.

Fourth: That cancer is believed to follow gall stone irritation in about 4 per cent. of all cases, giving rise alone to a mortality higher than early operative intervention.

Christian Science Cures.—Dr. Richard Cabot, in an article in the August *McClure's,* analyzes one hundred "Christian Science Cures." He does not discuss them from the point of view of logic or consistency, but by a study of the written testimonials and of his own experience, gained in the attempt to verify the claims of those who pronounce themselves cured. Summing up, he says:

"My conclusions are, first, that most Christian Science cures are probably genuine; but, second, that they are not the cures of organic diseases.

"In my own personal researches into Christian Science 'cures,' I have never found one in which there was any good evidence that cancer, consumption, or any other organic disease had been arrested or banished. The diagnosis was usually either made by the patient himself or was an interpretation at second or third hand of what a doctor was supposed to have said.

"As I have followed up the reported cures of cancer and other malignant tumors, I have found either that they were not tumors at all, or that they were assumed to be malignant without any microscopic examination. In other words, the diagnosis was never based upon any proper evidence."

SURGERY OF THE GALL BLADDER.*

BY T. E. POTTER, M. D., ST. JOSEPH, MO.

Operations upon the gall bladder are strictly American in origin, and that such operations are indicated for many troubles that were once thought to belong only to the internist, is no longer controverted.

When, on pressure over the abdomen, we discover extreme tenderness on the right side, in the neighborhood of the ninth costal cartilage, with or without tumor, associated with dyspepsia, with a morose, depressed and sluggish condition of the patient mentally, and there are occasional chills followed by fever, which appear with no regularity and with a jaundice once in a while, we assert, an exploratory incision is a justifiable procedure on the part of the surgeon, whether the absolute pathology can be made out or not. These symptoms, if they last, show that conditions exist which should be corrected, and the truth, as it is, can be revealed only by the use of the knife.

The exploratory incision, made under strictly antiseptic precautions, is associated with little, if any danger, and in the event that nothing of a pathological nature is found, the surgeon has committed no crime; but with the symptoms above enumerated, he will rarely, if ever, find that he has made a mistake.

Within the last year I had a patient present herself at my office with a severe stomach trouble, associated with tenderness on pressure, in the region of the right costal cartilage. There was extreme debility, no tumor or history of colic. She vomited a great deal, and just before consulting me, she had vomited blood. I made an exploratory incision and found the fundus of the gall bladder adherent to the duodenum and omentum. I separated it from the parts to which it was adhered, brought it forward, made ventral fixation, opened it and found no stones, but a granular catarrhal condition. In connection with the bile and mucus which made up the bladder contents, there were streaks of pus. I drained it several weeks, when the fistula closed itself. The patient recovered entirely, and does her own work to-day; something she had not been able to do without great suffering for several years.

In operating upon the gall bladder for any suspected trouble, the first thing to consider is a perfect technique:

1. The patient should be thoroughly prepared and from 24 to 48 hours taken for this purpose.

2. When upon the operating table and anesthetized, a good sized sand bag should be placed up under the lower portion of the thorax, so as to throw the base of the liver fully into view when the opening in the abdomen is made.

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*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

3. The point of the incision, as well as the character of the same, should be well considered. The upper portion of the lineæ semilunares, and the skin in the neighborhood of the same, should be thoroughly painted with tincture of iodine, completing the last preparation, in order to destroy as far as possible, the pyogenes epidermis albus, which is so difficult to rid the skin of and which so frequently causes most dangerous and troublesome stitch abscesses in any kind of abdominal section.

The character of incision is of importance and the one suggested by Bevan of Chicago, which is made something like the italic letter "*f*" is to be preferred. The incision should be from four to five inches in length. The upper portion should begin within a short distance of the linea alba, pass obliquely to the right lineæ semilunares, then a straight incision down along this line by the side of the rectus muscle for four or five inches, then at the lower portion the incision should pass to the right transversely for 1½ to 2 inches. When this kind of incision is made, the operator, after all hemorrhage is stopped, has a perfect view of the region of the bladder, and has a good opening through which to make his examination and do his work. The first thing for the operator to do now is to open the wound well with retractors and examine the conditions. Adhesions, hydrops, empyema, stones, ulceration, malignancy, contraction and elongation of the gall bladder must all be in mind and he should be able to recognize at a glance whatever conditions present themselves. His judgment as to his mode of procedure will have to date largely from this period in his operation. If stones of moderate size or a simple cholecystitis without complications are made out, in either case, a simple ventral fixation is all that is necessary. The bladder can be brought forward into the wound with hemostats or by introducing into the fundus two ligatures as anchors. Then the wound in the abdomen is closed up to the bladder above and below. The parietal layer of the abdominal peritoneum is attached to the peritoneum of the gall bladder with a continuous or interrupted catgut suture. Packing should be well placed in the wound, and around the bladder, so that when the incision is made for opening up the gall bladder no infection from the escape of the contents will take place. After this is opened and the bladder well emptied, the edges of the bladder should be cut off so that no part of it rises above the skin. All hemorrhage should be stopped, then a purse string suture of catgut must be used to close the opening, around a rubber drainage tube without openings in its sides. The tube should reach down as far as the cystic duct. This will give better drainage from the bottom. The anchors should be placed in the muscles and the skin allowed to rise above the edges of the fixed portion of the bladder. By doing this, the skin, when the surgeon removes the tube will soon close over the fistula, if he desires it to do so.

The custom some surgeons have of waiting a few days after the bladder is fixed into the wound in order that adhesions may take place between the gall bladder and abdominal peritoneum before opening it,

is unnecessary, if his technique has been good before operating. If he delay, the patient is kept in an agitated condition until the operation is completed, and further, when the operator opens the viscus, he may find a stone in the cystic duct, which may require his hand in the abdomen to remove, either by pressing it back into the bladder or by crushing it between his fingers; or he may have to go further and open the duct and remove the stone before he completely closes the wound. So we believe it is better to complete the operation at once whatever its character may be.

If the surgeon should find no stones or no evidence of diseased gall bladder, but simply adhesions between the bladder and some viscera, he can separate these adhesions, and in some instances in doing so, this will remove the peritoneum from the bladder. This should be corrected by bringing the torn edges of the peritoneum together with a continuous suture of a No. 00 or No. 0 catgut. This will in many instances shorten the bladder and make it look very much smaller than before the separation takes place.

The next question to consider is the removal of the gall bladder or cholecystectomy. In cases where the pathology is so extensive that it is impossible to save the gall bladder by ventral fixation, or where it is so contracted that it cannot be attached to the abdominal wall, or where there is malignancy of the bladder, which malignant condition demands its entire removal, cholecystectomy is a justifiable operation; but it is associated with far more danger than the simple operation of attaching the bladder to the abdomen and draining same. The preservation of the gall bladder or any portion of it, is of value.

It may be argued that patients live and seem to do well without any gall bladder. In my own work I have such results, as several of my patients are living whose entire gall bladders have been removed; and so far as I can see, they are enjoying good health, but where there has been occasion for opening the abdomen after this operation has been made, it has been found, in many instances, that a small bladder has formed, due to expansion of the cystic duct at the point of expansion, showing that there is a greater necessity for the existence of this bladder than we suppose and that, if removed, nature tries to reproduce it. It is claimed by some that if the diseased bladder is only fixed and drained, then when the fistula closes, stones are as liable to re-form, as they were formed originally. I have never had this occur, and I have seen only one case so fixed and drained that contained a stone, and this was a distended gall bladder that had been mistaken for hydronephrosis, and when the surgeon found his mistake he removed the contents of the bladder and attached the fundus in the incision, and I am of the opinion that this stone had been left in the gall bladder. We were several months afterward called upon to assist in removing this entire gall bladder and the patient has since enjoyed perfect health. To tell just when the entire gall bladder should be removed requires a good clever

thinker. In making this operation the surgeon should separate with his finger or a blunt dissector the peritoneal fold that which holds the gall bladder to the liver, after this is done and hemorrhage stopped, he should close the neck of the bladder with a clamp, not too close to the important blood vessels, tie well just below the clamp with linen or silk, the former to be preferred, then clamp securely higher upon the bladder, so that when severed, the contents will be held in the sack, cutting the organ off with a pair of blunt-pointed scissors between the clamps. If the fold of peritoneum which holds the gall bladder to the liver has not been entirely separated when the gall bladder is cut off, this can be completed.

The stump should be touched with carbolic acid then alcohol, and if possible the peritoneum brought over this part in order to completely cover it and it should be supported by a fold of omentum. A good sized drainage tube should be placed down to this so if there should be hemorrhage or escape of bile, there will be no trouble in draining it off.

Cholecystenterostomy—anastomosis between the gall bladder and intestines, preferably the duodenum, in cases of malignant obstruction—should be made with the Murphy button. If it cannot be made to the duodenum, it should be made with the transverse colon.

DISCUSSION.

Dr. J. F. Binnie, Kansas City: I think some of the essayists have been under the same misapprehension regarding Bevan's which I was under until recently. It is not a plain S-shaped incision; it is primarily vertical through the rectus muscle. If this does not give enough room, an upper and lower, more or less horizontal, cut should be added to it. Use the vertical incision alone if that gives enough room. Diabetes has been given as a positive contraindication to operation. I am free to say that I believe it may be an indication. Drainage of the gall bladder may, in some instances, aid in the treatment of diabetes. In emergency cases, where the patient is greatly jaundiced and greatly infected, even though the circumstances are not such as to be most favorable for good surgical work, it is best to operate. Cut down on the gall bladder, drain it and open up any pus collections, putting in a drain. Afterwards, under more favorable conditions, do a second operation. Under some conditions a complete operation at one sitting is life destroying. Suppose one has an old patient, much jaundiced, with a large gall bladder,—it may be cancer. In such a case it is one's duty either to make a fistula and let the bile escape externally, or do a cholecystenterostomy. I mention that particularly because I had that experience with a woman eighty years of age; her life was saved until she died from another cause, the original disease, however, being cancer.

Dr. J. D. Griffith, Kansas City: I wish to say that I have used the preparation mentioned by Dr. Halley in a case where I suspected

cholelithiasis. I am not certain about it curing but they seem to get along well.

Dr. Gordon A. Beedle, Kansas City: We are taking a great deal of responsibility upon ourselves as surgeons when we discuss purely the mechanical surgical relief as a cure for gall stone disease, and give no attention to the equally important medical attention these cases demand; of the greatest importance is the able internist, the surgeon, while of vast importance, lends only the mechanical assistance. The stone production is a result not the disease, as we all know, the recognized facts,—venous congestion of the portal circulation from various causes, furnishing the foundation in the majority of cases. Bile stasis with slow infection in the ducts or bladder, favor chemical changes and stones are produced.

I believe that the gall bladder is removed oftener than is necessary; we should avoid that, if possible, because the gall bladder has an important anatomical function. It is ridiculous to think that a patient can get along as well without it as with it; in addition to being a reservoir for the bile, it regulates the stream of bile thrown into the duodenum, by bulb-like tension through its elastic walls. Nature intended it to perform that function, and when you can preserve it you should do so.

Dr. Wm. A. Shelton, Kansas City: I believe that in the great majority of instances, an operation must be resorted to unless the patient is fortunate or unfortunate enough to die of some other disease before it progresses far enough to be that serious. Etiologically it seems to be a secondary condition. There are other etiological factors which must be considered. First, infection, which is apt to produce an extensive infection in the liver. Then there is the factor of resistance of the liver or efficiency of the liver in destroying the infection so the patient may not get gall stones. The third factor is stasis mentioned in the first paper. These factors are of the greatest importance, and must be considered. I do not think the operative treatment of the condition is all there is to it. While the operation is all right I think we should look into other matters and if the liver is not capable of doing the work that is thrown on it, we should work to relieve that condition. Try to relieve the liver of as much work as you can. I do not believe that the duty of the surgeon ceases when he has operated. There is something more than the operation. You must look into the other conditions. Appendicitis has been recognized as frequently existing in conjunction with gall bladder disease. If you operate upon the condition and not upon the cause the results will not be as good as if you take all the factors into consideration.

Dr. C. H. Wallace, St. Joseph: In July, 1905, I did a cholecystectomy on a woman 43 years of age. A cigarette drain was attached to the excised cystic duct. There was a discharge of bile for about one month when the sinus closed. The stools were clay colored during the discharge period. Following the closure of the sinus was a continuation of the clay

stools, accompanied by chills every few days. Patient became mildly jaundiced. She returned for a second operation in March, 1906. Upon exposure of the common duct, at this time, it was found almost completely torn across, joined only on posterior surface. It not being possible to anastomose duct with bowel, on account of the dense adhesion, the edges in the torn duct were freshened and the duct virtually anastomosed with itself. Cigarette drain was placed at the side of the closure and the abdominal wound closed. Convalescence was favorable with free discharge of bile from the drain. There was also passage of bile into bowel, indicated by return of stools to normal color. Jaundice rapidly disappeared. Sinus continued to discharge small quantities of bile-stained mucus for three months and then closed. General health since has been good. I mention this case as being somewhat unique. If the common duct has ever been anastomosed with itself I have been unable to find report of such case.

Dr. Jesse S. Myer, St. Louis: Such papers might well be read with profit before the Medical Section of this Association. As a rule these cases do not come into the hands of the surgeon until the diagnosis is fairly definite and often not until complications have arisen. There is probably no condition more often overlooked by the internist and clinician because of the fact that the symptoms are often misinterpreted as due to primary gastric disturbances. In my opinion as soon as the diagnosis of gall stones is made, the case becomes a surgical one. I deem it best to dispose of the gall stones first because of the serious complications that may arise from procrastination and then to look to the treatment of conditions that may have resulted in the formation of the concretion. Whenever dyspeptics are met with, who have suffered for a long period of years without relief by rational medical treatment and the careful examination of the stomach reveals no disturbance either in the motility or the secretions, it is well to consider at once the possibility of gall stones as the primary disturbance. It is sometimes difficult to differentiate cholelithiasis from ulcer of the duodenum, ulcer of the stomach, appendicitis and stone in the kidney, but I have found that a careful history of the case, careful observation for at least a short period of time, the examination of the stomach contents and fèces will enable one, as a rule, to arrive at a definite diagnosis. When symptoms characteristic of gall stones or one of the above named conditions exist persistently, and a positive diagnosis is not possible, exploratory operation should be resorted to. All that the internist can hope to accomplish in the treatment of gall stones is the relief of the symptoms and not a cure. In view of the serious complications that may arise when we least expect them, such as perforation of the gall bladder, common duct obstruction, carcinoma, etc., the earlier the concretions are removed, the better.

Dr. Potter, in closing: One point in regard to symptoms, which I mentioned in my paper, that I should like to emphasize is, that the

symptoms of gall stone disease are not always the same. We may have stones in the bladder and not have a particle of jaundice. I have seen many instances where this was the case. One was that of a man who weighed 220 pounds, who became emaciated, heart very much exhausted, suffered from angina pectoris. I found a little tenderness in the region of the right hypogastrium. He told me that he occasionally vomited and thus found relief. These were all the symptoms present that I thought pointed in the direction of stones in the gall bladder. I told him that I thought he had such a trouble and he hooted at the idea, and left when I advised an exploratory incision. Two weeks after he became jaundiced. Up to that time he had never had any symptoms of jaundice. We operated and took out two large stones.

Dr. Joseph McDowell, founder of the McDowell Medical College in St. Louis, and a firm believer in ghosts, tells an interesting story:

"A German girl died with a very unusual disease, and we determined to get her body for dissection. We dug it up and laid it in the college; but the Germans heard of it and made things lively, and I heard they were coming that night to search for the body. I went down to hide it and threw it over my shoulder to carry it to the top loft to conceal it in the rafters. At the top of the first flight, out went my lamp. I put down the corpse and re-lighted it. Out again, and as I felt for another match I saw my dead mother standing a little way off and beckoning to me. I followed to the left, hid the body and came down in the dark. At the window where my mother had appeared were two armed Germans, talking, and when I got to the dissecting room door I saw six more down in the hall. My only chance of hiding was in the dissecting room. Opening the door as the Germans came upstairs, I saw my mother standing by the table from which I had taken the corpse. I had no light, but light came from her. I lay down and covered my face with the sheet and the men came in. They uncovered four bodies and came to me. I thought of jumping up and scaring them, but heard a voice say, 'Be still, be still.' They were looking for a girl, and my feet were sticking out at the end of the table. 'Here's a fellow who died in his boots; I guess he is a fresh one,' said a German; and they did not even uncover my face, but left the house."—(Excerpt from "The Barred Road to Anatomy," by Howard A. Kelley, M. D., *Johns Hopkins Hospital Bulletin.)*

EXAMINATIONS OF THE FECES AS A ROUTINE PROCEDURE.*

By Jesse S. Myer, M. D., of St. Louis, Mo.

Today the clinical laboratory does not present a more interesting chapter nor a more fertile field for work than the examination of the feces. As a routine procedure this work has taken its place in the same rank with the examinations of the urine, stomach contents and blood. In many diseases of the gastrointestinal tract, as well as certain diseases manifesting themselves only in constitutional symptoms, an absolute diagnosis is often impossible without the examination of the feces. It is true that this work has not become as popular, and is not as universally done as are the examinations of other excretions, and in private practice will probably never be so, because of the unpleasant duty on the part of the patient of collecting the specimens and the unpleasant features in the examination. The work cannot be done satisfactorily on the "little table in the corner" because of the unpleasant odor. For this reason, as well as because of the specialized knowledge required, the work will in all probability always be done by those especially prepared for it, both as to laboratory facilities and experience.

Personally, I can say that the satisfactory results derived from a study and practice of the examination of the feces rob the procedure of practically all of its unpleasant features. The intestines are unfortunately so situated and constructed that the physical examination yields but little that is positive, excepting, of course, in case of tumefactions, stenoses and localized inflammations. In the diffuse affections of the intestines, the physical examination reveals practically nothing aside from the usual areas of tenderness. The character of symptoms produced by the various diseases of the intestines are so similar in nature that we are justified in saying that there are no pathogonomic signs of certain pathological lesions. The previous history, while helpful in arriving at a diagnosis, does not make possible a positive diagnosis except in isolated cases.

Until the introduction of the stomach tube and the test meal, within the past two decades, the diagnosis of gastric disturbances was, for the same reasons, not reduced to a science as it is at the present time. Since the development of this art, the examination of the stomach contents has become a general practice among physicians who have the time and inclination to call to their aid laboratory findings in the diagnosis of gastric disturbances. No one can dispute the great value that is attached to these examinations. The diagnoses of intes-

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tinal diseases are quite as amenable to laboratory interpretation, and yet only during the last decade has the subject received anything like its merited attention and then only from a few laboratory workers and specialists in gastrointestinal diseases. While it is a fact that experience and persistence are of the greatest importance in the development of thorough knowledge of the technique, nevertheless with reasonable powers of observation and even a meagre knowledge of microscopy and chemistry, much can be accomplished. Because of the great variety of substances ingested and consequently excreted in the feces, the work presents a most fertile field for misinterpretation. Therefore, repetition, persistence and careful observation are the chief requisites.

The objects of the examination of the feces may be said to be threefold, namely: (1) The diagnosis of diseases manifesting themselves through symptoms on the part of the gastrointestinal tract in the largest sense of the term, including therein the stomach, intestines, liver and pancreas. Among these symptoms may be named diarrhea, dysentery, colics, constipation, mucus and blood in the stools, etc. (2) Certain obscure constitutional diseases (pernicious and secondary anemias, convulsions in children and certain nervous manifestations, etc.,) in which there may or may not be accompanying symptoms on the part of the gastrointestinal tract. (3) The functional determinations of gastrointestinal digestion.

It shall not be within the scope of this paper to enter into the discussion of the details of technique of examinations of the feces, for this would involve, depending upon the point to which these analyses are carried, the most intricate problems of chemistry and bacteriology. In the ordinary routine work, these are not required any more than are the examinations for indican, acetone, the diazo reaction, etc., in the routine examinations of the urine.

In order to draw deductions from the microscopic examination, which is by no means the least important part of the examinations, the stool should be obtained in as fresh and undisturbed a state as possible. It should be inspected in a fresh state, because upon standing the surface of the stool becomes darker through the further oxidation of the coloring matter, and also because of the destruction of the motility of certain parasites, such as the ameba coli, etc. The stools should be passed if possible into the very vessel in which it is brought to the laboratory, (a Mason jar will suffice) in order that blood, mucus, etc., may be observed in its relation to the entire mass of feces. In the inspection of the feces, there must be taken into account the amount, consistency, color, odor and the presence of macroscopical particles. As to the amount of feces passed in twenty-four hours, but little need be said, for this varies with the quantity and quality of food ingested. One partaking freely of proteids, such as meat, eggs, etc., which leave but little residue, will necessarily pass a smaller, harder, darker stool than

one eating freely of carbohydrates, in the form of potato, spinach, asparagus, and the green vegetables in general. These substances leave a large residue of cellulose. For this reason the season of the year may greatly influence the size of the daily passages, the stools being larger in summer, when one eats freely of fruits, berries and green vegetables. Copious, infrequent stools point, as a rule, to the existence of a disturbance in the upper portion of the intestine, while meagre, frequent stools point to the existence of the trouble in the lower portion of the intestine. While one or two fairly copious stools daily may be considered the normal state, there are many cases on record in which individuals, in a perfect state of health, are uncomfortable without three or four actions daily; while on the other hand there are certain individuals who find that they feel best when having but one action a week. These, however, are exceptions to the general rule.

The normal consistency of the feces, while difficult to describe in words, is a point to which physicians have called attention for many decades as an indication of the state of the intestinal tract. The stool should be of such a consistency as to maintain its form after being passed without, however, retaining the imprints of the haustræ. A liquid stool is always abnormal if not produced by a cathartic. The normal stool then should be a soft, cylindrical mass or form in the vessel a cone-shaped or pyramidal mass. Hard scybalæ indicate a prolonged retention in the colon, for it is in the colon that the water is extracted from the intestinal contents. A diarrheic stool indicates an increased peristalsis on the part of the colon alone, or the small intestine and colon. The contents enter the colon in a fluid state and, therefore, if hastened through the colon are expelled in this state.

The color of the feces is usually dark brown, due to the end results of bilirubin oxidation to hydrobilirubin. In total absence of the bilirubin from the intestinal tract, as in cases of complete obstruction of the common duct, the stool has an ashen gray or clay color. A number of variations in the color of the normal stool may be produced by the character of food eaten; if meat predominates the color will be a dark brown; if vegetables, a light brown; if milk, a light or orange yellow; and if fat, a grayish yellow color. Vegetables containing iron,—such as spinach,—give a darker color to the feces. The influence of the various drugs upon the color of the feces is well known. Heavy metal salts, such as bismuth subnitrate, iron preparations, etc., produce a black color as a result of their conversion to bismuth or iron oxydul. In these cases the microscopic examination shows the color to be due to rhomboid-shaped black crystals. Charcoal also gives a black color to the stool and is found in the feces microscopically as amorphous black masses. Therefore before venturing a diagnosis as to the presence of blood in the stools, the patient should be carefully questioned both with reference to drugs and food taken in the previous forty-eight hours. These factors have often led to the mistake of suspecting blood, which

gives a similar color to the stool. Depending upon the amount of blood present and the source of its origin, the feces may vary from a very dark brown to an inky black, due to the conversion of hemaglobin to hematin. If the stool appears black in color, due to blood, it indicates that the blood has been in the intestine for a considerable time, hence, comes from the upper part of the gastrointestinal tract, as, for instance, in ulcer of the stomach and duodenum. If, on the other hand, the blood comes from the lower portion of the tract, it is more apt to appear in the fresh state, giving to the stool a reddish brown color. While this is the rule, it is not infallible, for it must be remembered that blood coming from the small intestines may be carried through so rapidly as to appear in the fresh state, and on the other hand, blood coming from the colon may remain there so long as to be changed in the colon. However, if the stool is black through and through and is passed in a formed state, we may conclude that it was completely admixed with the feces while still in a liquid state, and inasmuch as the feces begins to harden in the colon, such an admixture must have taken place in or above the cecum. Fresh blood intimately admixed with the feces occurs only in liquid stools and usually comes from the colon. If the stool is formed, fresh blood is not found thoroughly admixed with it, for reasons that are evident. A few drops of fresh blood passed immediately after, hence on top of the stool, come invariably from the rectum (hemorrhoids, fissures, etc.), and the same may be said of a drop or few drops immediately preceding the stool. Blood adhering to the surface of scybalous masses come usually from a point below the splenic flexure of the colon, most often from the sigmoid, because it is here that the formed stool takes on the shape of the haustræ.

In my experience these same rules may be applied to mucus in the stools. Small bits of mucus intimately admixed with liquid feces usually come from the small intestine, while the larger masses not intimately admixed with the feces usually come from the colon. Much depends upon the length of time that was required for a given stool to be expelled, as to character of mucus found. It has been maintained by some authorities that mucus from the small intestine is practically never found in the feces, having been dissolved in its transit. Mucus on the external surface of scybalæ comes from the lower portion of the colon, almost invariably the sigmoid or upper portion of the rectum. Small quantities of jelly-like mucus passed just before or just after the stool, come from the sigmoid or rectum.

After the stool has been inspected with reference to the qualities just described, a portion should be set aside for microscopic and any chemical examinations that may be indicated. The remainder is washed through a specially designed sieve, and the large particles remaining on the sieve are examined with reference to (1) food remnants, (2) parasites, (3) concretions, (4) foreign bodies. There occur in the feces of practically every individual partaking of a mixed diet,

a certain amount of food residue, which varies in amount according to the quantity and character of food eaten. The greater the amount of vegetables, the greater the residue. This is due to the fact that practically all vegetables contain a greater or less amount of cellulose, which is practically indigestible in the human intestine. The vegetable residue that is to be found in any stool depends upon three factors: (1) The amount and character of the cellulose present (capsules of peas, and beans, the fibro-vascular bundles in celery and the stalks of vegetables generally, the seeds of berries and fruits, etc.). (2) The mode of preparation of the food (as to whether raw or cooked, strained or unstrained, etc.). (3) Degree of mastication.

There is no doubt but that much of the indigestion, gastric and intestinal, is due to the poor preparation and to the rapid bolting of food. It is amazing at times to note the large amount of undigested residue which may be found in the washings of the feces, not only of children, but of unthinking adults as well. Large quanties of raw fruits with seeds, the stalks of vegetables, peas, beans, corn, etc., are swallowed without being properly masticated, and often without being properly cooked, and as a result are found practically unchanged in the feces. I have often found a demonstration of this sort a splendid object lesson to patients and have thus often succeeded in getting them to correct their habits by showing to them the probable cause of much of their indigestion. I could cite a number of cases in which a change in the character of food and habits have completely corrected the existing gastro-intestinal disturbances. Unless meat is swallowed in large portions, it is rarely found in the stool of a healthy individual, excepting as microscopical remnants of muscle fibres. Even a large bolus of meat is usually broken up before it is evacuated with the feces. However, in cases where diarrhea already exists, meat may be found in the feces in a practically undigested state. Schmidt has shown that the fibrous tissue is digested in the stomach, while the muscle fibres are largely digested in the intestine. Therefore, a poor digestion of fibrous tissue indicates a gastric disturbance, while the poor digestion of the muscle fibre indicates an intestinal indigestion; a poor digestion of both indicates a disturbance in the stomach and intestines.

Not infrequently intestinal parasites, or portions thereof, are found in the coarse washings. The parasites which we most frequently meet in this section are tænia saginata and tænia solium, or tapeworms obtained from eating raw beef and pork, respectively, ascaris lumbricoides, or ordinary round worm, the oxyuris vermicularis, or pin worm. In the last decade another parasite has been added to those sometimes met with even in this state, namely, ankylostomum duodenale or hook worm. This is essentially a tropical disease, which of late years has migrated to this country, and not infrequently cases are reported in various sections of the United States, especially in the Southern States. The worms, however, are not themselves usually discovered in

the feces, but are detected by the presence of the eggs, of which I shall have occasion to speak later. Often the first evidence that one has of the existence of parasites is in the discovery of segments of the tapeworm, of the male or female ascaris, or of large numbers of the oxyuris. These are practically the only parasites that we meet with in this section visible to the naked eye, and the diagnosis may be promptly made upon discovering portions or the whole parasite.

The concretions that may be met with in the washings of the feces are gall stones, fecal concretions and fatty acid concretions. Gall stones are often searched for after acute attacks of colic in which cholelithiasis is suspected. In such cases the feces should be examined for a period of at least seventy-two hours following the attacks. While the inability to find the concretion in the stool does not exclude the existence of gall stones, the positive finding absolutely confirms the diagnosis. When a gall stone passes through the common duct into the duodenum, it is usually found intact in the feces, though it has been shown, especially in experiments upon animals, that they are sometimes crushed and destroyed in their passage through the bowels. Fatty acid concretions, so often found in the feces in those ingesting large amounts of oil, especially olive oil, have led to the employment of this method by quacks to deceive the layman. Persons afflicted with paroxysmal attacks of pain in the abdomen are given large quantities of olive oil, some of which the intestine is incapable of assimilating and absorbing, and is, therefore, expelled in the form of fatty acid concretions. These concretions, are sometimes passed by the handful and are demonstrated to the patient as the sought-for gall stones. If one is in doubt as to the character of a concretion, i. e. whether it is a fatty acid, fecal concretion, or a gall stone, a section through it will usually enable one to say definitely to which class it belongs. If there is still doubt, the concretion may be dropped into ether, which, in the case of a fecal concretion, will have no effect at all; but in the case of fatty acid concretions or gall stones, will dissolve them. After the evaporation of the filtered ether, cholesterin will be left behind as a precipitate if the concretion is a gall stone, while only fat droplets will remain in the case of a fatty acid concretion. Fecal concretions may be at times so hard as to greatly resemble gall stones in appearance and structure. In this case the chemical test will very quickly clear up the diagnosis.

It would be impossible to include within the scope of this paper the details of the chemical, microscopic and bacteriological examination of the feces. The microscopic examination presents by far the most interesting phase of the subject, because of the great variety of vegetable cells and other morphotic elements. Through the aid of the microscope one recognizes the microscopic varieties of intestinal parasites, which escape, of course, the macroscopic examination. Among these may be included ameba coli, with which we now meet not infrequently in this state. Since the Spanish-American war, especially, a number of cases have been reported. Formerly the

disease was essentially a tropical disease and found only in seaport towns in this country, but in the last ten years especially cases have been reported from practically every section of the country and as far north as Michigan. It was my opportunity to report one of the first cases, if not the first case officially reported in this state, in 1900. The moving amebæ are to be found in the sanguinous mucus on a slightly warmed stage. An absolute diagnosis cannot be definitely made unless they are found in motion. Among other unicellular organisms found in the feces may be mentioned the cercomomas intestinalis, the trichomomas intestinalis, the lamblia intestinalis, etc. These have no recognized pathological significance and need only be mentioned in passing.

The eggs of the various parasites may be recognized in the microscopical examination of the feces and thus a definite diagnosis of the presence of the worm made. Only recently a case came into my hands in which I was able to make a diagnosis of double intestinal parasitism (trichocephalus dispar and ascaris lumbricoides) through the presence of the eggs. In hook worm disease, the worm itself is rarely found, and the diagnosis can only be definitely made on the demonstration of the eggs, which are quite characteristic. It is scarcely possible to make a differential diagnosis, from the appearance of the eggs alone, between the tænia solium and tænia saginata. But, with this exception, there is little resemblance between the eggs of the various intestinal parasites. Upon finding the eggs, therefore, the character of the parasites present may be readily determined. Great care is necessary not to confound the eggs with remnants of vegetable cells, which to the unpracticed eye may appear very similar. Plant hairs, plant spirals, various forms of vegetable cells, epithelial cells, blood corpuscles, leucocytes, various bacteria, fungi, etc., all play a role in the microscopical examination of the feces. Among the crystals found may be mentioned fatty acid, oxalate of calcium, ammonio-magnesium-phosphate, and the Charcot-Leyden crystals. It will be impossible here to dilate upon the significance of the microscopical findings of all of these morphotic elements, and one cannot hope in the allotted time to do more than call attention to them.

The test diet of Schmidt and Strassburger has received much attention during the past few years from those engaged in this sort of work. A diet of known consistency is administered to the patient for several days and the feces examined as heretofore stated, with reference to food remnants, the stage of digestion, the presence of fibrous tissue (indicating a deranged gastric digestion), undigested muscle fibres (indicating a deranged intestinal digestion), the presence of fats, fermentation, bilirubin oxidation, etc. Too much credit cannot be accorded them for the character of their work. Their test diet will occupy the same position with reference to the examination of the feces, that the test meal does in the examination of the stomach contents, and promises just as satisfactory results.

In reviewing the significance of blood in the feces, I purposely omitted until this time reference to the presence of traces of blood in the stool, which do not manifest themselves microscopically or macroscopically. When a very small quantity of blood is present in the stool and has been completely broken up, its presence can only be determined through chemical tests. The presence of minute quantities of blood has been called "occult hemorrhage" and may come from bleeding vessels or the surfaces of denuded areas anywhere along the gastrointestinal tract from the mouth to the rectum. In all cases, therefore, in which ulcer of the stomach, cancer of the stomach, ulcer of the duodenum, or other portions of the small or large intestine, and carcinoma of the intestine are suspected, no examination of the feces is complete without a chemical test for blood by the guaiac-turpentine or benzidine tests. In order to exclude the possibility of the patients having ingested anything containing blood pigments, such as meats, broths, etc., they should be put on a diet free from these substances for two or three days prior to the examination. The mouth should be carefully examined to exclude the possibility of minute quantities of blood having been swallowed, and the rectum to exclude the possibility of hemorrhoids, fissures, etc., (in which case the blood would be seen macroscopically). With these precautions, the finding of a positive trace of blood in the feces, together with the symptomatology and physical findings enable one to arrive definitely at a diagnosis of ulcer or carcinoma, which might otherwise remain in doubt.

The determination of traces of blood in the feces by the guaiac-turpentine and benzidine tests, recommended by Weber and the Adlers respectively, and perfected by Boas, Schlesinger and Holst, and others, has proven one of the most valuable aids, in the diagnosis and differential diagnosis of gastrointestinal diseases, that has come to us in the last decade.

In presenting this résumé of important points in the examination of the feces, it has not been my endeavor to cover the subject, but simply to touch upon those features that enter into the routine examination. The chief object, however, is to direct attention to a class of work that is being greatly neglected by the general profession.

3894 Washington Blvd.

PNEUMONIA.*

BY TINSLEY BROWN, M. D., HAMILTON, MO.

I am aware that in choosing my subject I am not bringing to your notice the name of a disease new to you, but one that is familiar to you as medical men, and also to the laity. This dreaded affection claims its thousands yearly. There is probably no other acute disease so fatal in results. The disease is found alike in valley, plain and mountain. It is no respecter of age, sex or condition of life. We find those in childhood, youth, middle life and old age, stricken alike.

The two general divisions are the lobular, or broncho-catarrhal form, and the lobar or croupous. The first form is most common in youth and old age, in which it follows a bronchitis, or some disease of the respiratory tract, such as diphtheria, scarlet fever, measles, whooping-cough or some other disease. The second form is probably a primary disease, and the onset is sudden; frequently the first symptom is vomiting or a severe chill, equaled by none except that of ague. Since the cause is acknowledged to be of microbic origin, we may expect the different forms to be caused by different bacilli. That denominated by Friedlander and Frobens as pneumococcus, is found to predominate in the lobar form, and the mixed infection in the lobular; the pneumococcus, streptococcus and staphylococcus may all be found, or a few of the first or many of one or the other, but in the severe cases the staphylococcus predominates. In lagrippe which is followed by pneumonia, the bacillus of Pfeiffer and mixed infection is probably the etiological factor.

The toxemic or septic form is called adynamic, low, or typhoid, pneumonia. The clinical picture is more or less the type of blood poisoning, with symptoms involving the nervous mechanism.

Latent pneumonia is where the characteristic symptoms are wanting. Weak and slow pulse, low temperature, and respiration not deviating much from the normal, and cough and expectoration absent or scanty. Some delirium may be present. Physical examination reveals the signs of pneumonia. This is commonly found in old age and alcoholics.

There is a pneumonia which is called the abortive form, in which all the symptoms are well marked as to chill, rapid rise in temperature, accelerated pulse, and respiration. The cough and the rusty-colored sputum are well marked, with physical signs of effusion. The pain is very characteristic. This form runs a short course and terminates in from 12 to 72 hours by rapid crisis. I had such a case which terminated in 48 hours with rapid recovery.

The obstructive form is that in which in the passage of blood through the lung is obstructed, arising from the extensive consolidation.

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*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

Congestion, or edema of lung, may cause the same symptoms such as cyanosis, dyspnea, and rapid heart failure or dilatation, resulting in a rapid fatal termination.

The gastrointestinal symptoms may often cause the real malady to be overlooked. I have had cases in which the symptoms of pneumonia were absent or masked by the gastric symptoms. The dual distribution of the pneumogastric nerve may account for this manifestation.

There is another form in which the nervous symptoms predominate, simulating meningitis, occurring mostly in children, and at one time was thought to be associated with pneumonia of the apex of the lung. This is not always the case, as I saw a case not long since that had been mistaken for meningitis in which the pneumonia was in the base of the right lung. The patient made a rapid recovery.

The form in which there is marked tenderness and abdominal pain might be mistaken for appendicitis or peritonitis. I call to mind one case in which a severe pain in the right abdominal region had been diagnosed as appendicitis, but turned out to be pneumonia of right lung; another in which there had been diagnosed an obstruction of bowels, I found on physical examination, to be a pneumonia far advanced. Pleurisy of the diaphragm may account for this, and the rigidity of the abdominal muscles to limit the movement of the same in the respiratory act. The involvement of the terminal branches of the intercostal nerves may account for some of the pain.

There is a form of pneumonia in which the physical signs are delayed until the fourth or fifth day, and are perplexing cases but finally all the physical signs are plain. Hypostatic congestion, pulmonary edema, acute bronchitis, and pulmonary infarction, all may simulate the symptoms of pneumonia. When we take all the variations of symptoms and signs in consideration, it is easily to be seen that it takes a great deal of acumen and tact to arrive at a correct diagnosis in many instances. Most cases of lobar pneumonia have in connection more or less pleurisy. I have seen it asserted that most cases of empyema come from a pleuro-pneumonia, probably from the pneumococcus or mixed infection. I have known such cases to be mistaken for a consolidation of lung. Liquid effusion might be mistaken for it also. The temperature and pulse are not always an index to the severity of the disease, but as a rule a pulse of 120 in an adult and a temperature of 104 or more, are a bad omen. A subnormal temperature, and a rapid and weak pulse are worse symptoms. The temperature taken in the axilla, or under the tongue is not always reliable; the correct way, especially in children, is to take it in the rectum.

The treatment has varied with time, and that which was thought to be essential in every case is scarcely used at all, viz., blood letting. In a practice of over thirty years, I have never resorted to this as a remedy, nor have I ever seen a case in which I thought it would do any good, but only harm. In Niemeier's work on the practice of medicine, of the edition of 1871, the author advocates the application of ice cold

compresses to the chest, especially in the stage of effusion. I have never had the courage to try it, but do not doubt that it may be good in some sthenic cases. I have used cold bathing to lower the temperature, with good results. I have used such treatment, by applying cold compresses, to relieve croupy symptoms, in acute laryngitis, and generally get good results.

The expectant plan of treatment appears to be the most plausible, and the one that I have always followed. The disease is a self-limiting malady, but there are many remedies that can assist in tiding the patient to a safe harbor. The eliminative processes must be looked after; the ventilation of the room which the patient occupies must be watched, and his food should be of such character as to be easily digested. Forced feeding I think avails nothing and very often does harm. The open air treatment, as now advocated by many, that is in tents or pavilions, I think is plausible. In late years I insist on keeping the doors and windows open and make it as near outdoor treatment as possible, and, I am led to believe, with good results. The body should be well protected. The inhalation of oxygen gas is now used where available, but I have had no personal experience with it as a remedy.

In cases where there is a full, accelerated and bounding pulse, I am sure that aconite or veratrum, are of great benefit and I use them in most cases; of late I use aconitine and veratrine which I consider preferable. In former years I used quinine in varied doses, but of late I have discarded it entirely. I have no experience in the administration of large doses as advocated by some physicians. Digitalis is a remedy of much value in the later stages of the malady, as well as where indicated in some conditions in the earlier stage although I now use digitaline. Strychnine is indicated where there is a failing heart. The nitrates as nitroglycerine, or nitrate of soda, are indicated and are of much value as a vasomotor dilator. Morphine or codein should be given for the relief of pain. Strychnine, morphine and codein should be given hypodermically, and it is better to give every remedy that way if possible. Alcoholic preparations are of use in some cases, but in recent years I seldom use them. The coal tar preparations are dangerous and should seldom be used. In most cases expectorants are unnecessary. The muriate or carbonate of ammonium with syrup of tolu, or carbonate of ammonium with infusion of senega, may assist in promoting absorption of the effused material in the lung.

The application of poultices and such remedies in my opinion are useless, and in many instances do harm. There has been a great deal said lately in the medical journals and other writings in reference to the application of the theory of the opsonic unit in this disease. Vaccines are manufactured by a number of physicians' supply houses, and my attention has been called to the antipneumococcic serum. I have had no experience in its use but trust it may do all that is claimed for it. I intend to give it a trial in a series of cases during the coming year if opportunity presents.

CEREBRO-SPINAL MENINGITIS.*

BY GEO. W. GOINS, M. D., BRECKENRIDGE, MO.

It is not my purpose to introduce original data upon this subject, but rather to call attention to some recent investigations relating to this disease.

I was prompted to choose this subject because of having seen a typical sporadic case of this disease a short time ago. The picture of the physician left in the mind is not easily forgotten; he thinks, meditates and hopes, but to no avail.

We have been, up to the present time, practically helpless in coping with this malady, but during the past three years a ray of sunshine is apparently penetrating the dark cloud of therapeutic inertness. A brighter day seems to be dawning.

Cerebro-spinal meningitis is an infectious disease of sporadic and epidemic occurrence, of microbic origin, and characterized by an inflammation of the meninges of the brain and cord.

There is some evidence that it prevailed during different periods in the 14th, 16th and 17th centuries in Europe. In the United States it was first recognized at Medfield, Mass., in 1806, and until 1816 it was constantly epidemic in the New England states. It may be said to have been clearly recognized in all the civilized countries during the first half of the 19th century.

Perhaps the first epidemic in this state occurred at Chillicothe, in 1861. It developed among the soldiers stationed at that point and spread among the civilians of the city and surrounding country. Dr. M. Bottom, of Breckenridge, Mo., saw and treated several cases at that time; and at about the same time Dr. J. M. Allen, of Liberty, Mo., was treating an epidemic in that vicinity. It has been epidemic in various localities of the state since then:—At Wellington, in 1883, and again in 1889, at which time Lexington also suffered an epidemic. It appears sporadically in the city of St. Louis and various localities of the state every year; and likewise in most of the large cities of the United States and Europe. It is ever sporadic throughout the north temperate zone.

The specific cause of the disease was unknown until 1887 when Weichselbaum discovered the dipplococcus intracellularis. It is very similar to the pneumococcus; both belong to the diplococci family. This similarity has given rise to some confusion as to the relation of pneumonia to cerebro-spinal meningitis. More recent investigations have, however, clearly differentiated the two diplococci.

Age and social condition seem to exert no influence on this disease. It occurs more frequently in the crowded tenement districts of metropoli-

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*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

tan cities than in rural districts. The male sex is affected oftener, perhaps, than the female, due most likely to the greater exposure to the vicissitudes of weather. Soldiers on garrison are more susceptible than civilians. It rarely develops among sailors at sea. It occurs oftenest during the winter and early spring but may occur at any season.

In 1904 the city of New York appointed a commission of nine members and appropriated ample funds to investigate this disease.

This commission began an investigation to learn the mode of infection. Many observers have claimed to find the germ in the nasal secretion of normal persons who had not been exposed to the disease. The findings of the commission are as follows: In a series of 52 cases of epidemic meningitis, 12 only showed the germ in the nasal secretion during the first week of the disease; 6 only between the 6th and 9th week; and in one severe case the germ was found on the 67th day of the disease. The nasal secretion of 45 healthy persons living in close contact with meningitis patients was examined. The meningococcus was found in five instances only and that during the first week of exposure to the disease. Fifty-five first year medical students, who had not been exposed to the disease, were examined with negative results in each instance.

The commission further shows that the mode of transmission is by immediate contact, or very close proximity, as the following figures demonstrate: In the winter of 1904-05 200 cases occurred, two or more in the same house. In 58 houses there were 144 cases which were carefully studied, to-wit:

In thirty-nine houses there were two cases each.
In fifteen houses there were three cases each.
In two houses there were four cases each.
In one house there were five cases.
In one house there were eight cases.

This tends to affirm that close proximity to the disease increases its communicability; but what individual variation from the normal is necessary for the germ to gain admission into the spinal canal and there to incubate is yet unknown. An investigation along the opsonic theory may enlighten us.

Symptoms: The clinical picture of a case of cerebro-spinal meningitis is a vivid one. The individual, in apparent health, is suddenly stricken with pain in the nucha, stiff neck, headache, vomiting, convulsions, Kernig's sign, a fluctuating temperature, coma, and, at least in 50 per cent. of the cases, death. These symptoms may appear very rapidly and death ensue within twelve hours from the onset; or it may run a chronic course through months. Stiff neck is present in about 90 per cent. of the cases and Kernig's sign is present in more than 50 per cent. of the cases.

Mortality varies with the epidemic from 50 per cent. to 100 per cent. One attack does not render immunity from another. The incubation period is probably three days. The commission observed that it de-

veloped within two days of each other in two children, and the only contact between them had occurred one day previous to the onset of the first case; the second case developing the second day after the first. If both children became infected from a common source on the same day then the period of incubation would be one day for one case and three days for the other. If the second case was infected from the first, then the period of incubation is three days, which is most likely as it agrees with other cases in the literature.

Complications are common, and among the cases that recover may be mentioned, insanity, blindness in one or both eyes, deafness in one or both ears, paralyses with loss of voice, or use of hands, or lower extremities. The complication may be temporary or permanent, depending upon the damage to the nerve structures.

The treatment has been symptomatic until the commission developed a serum which, from a limited application and observation, promises much. I believe we may expect almost as much as we have achieved with antidiphtheric serum in the treatment of diphtheria. The following reports would bear out this conclusion:

At Akron, Ohio, 11 cases treated with serum, 8 recoveries, 72%.
9 cases treated without serum, 8 died, 89%.

Castalia, Ohio, 16 cases treated with serum, 11 recoveries, 69%.

Of these 16 cases 10 were treated within 72 hours after the onset with 9 recoveries, or 90%.

New York City, 365 cases treated without serum, 344 died, 91%.

Penn. Hospital, 5 cases treated with serum, 4 recoveries, 80%.

The fatal case in this series was not treated until the 11th day of the disease.

Saint Vincent's Hospital, N. Y., 3 cases treated with serum, 3 recoveries.

The method of treatment with the serum is by direct inoculation into the spinal canal after the withdrawal of spinal fluid by means of lumbar puncture. The quantity of serum to be used should not exceed 30 cc., and should be repeated every twenty-four hours for three or four days, or longer. As much as 120 cc. have been injected into the spinal canal in four days without causing any unpleasant symptoms. The best results have been obtained where the serum has been used early in the disease.

Ice caps to the head, cold packs and counter irritation to the spine, blood letting, leeching, hot baths, and opium was the old treatment; and the best therapy to-day, aside from the serum treatment, is, application of cold, narcotics to relieve pain and convulsions, catharsis with calomel and salines, nutritious liquid diet, quiet dark room well ventilated and general sponging and alcohol rubs as indicated. With all of this we still have more than 50 per cent. mortality. Let us hope that the serum treatment shall prove all that it promises.

SANITARY CONSTRUCTION AND FURNISHING OF CHURCHES, HALLS AND PUBLIC ASSEMBLY ROOMS.*

BY A. H. VANDIVERT, M. D., BETHANY, MO.

The first consideration in the proper construction of any room for general assemblies should be to see that there is provision for an abundance of air so forced in as to insure frequent changes, thus avoiding breathing an air insufficient in oxygen.

The next consideration should be the proper heating and diffusion of heat; the proper lighting and diffusion of light and proper furnishing.

The amount of space for each individual supposed to be in a building is well understood and generally provided for by the general architectural plans, and in modern construction it is a part of the business of the architect to see to this important detail. Another equally important point for consideration is the circulation of the air. It is impossible o secure the circulation of the air without provision for ingress as well as egress of the air. The ideal way to do this is by what is termed the fan system, that is by fans driving the fresh air into the conduits leading into the room, and draft flues taking out the foul air. However, other and probably cheaper means may be employed in small rooms, one being what is known as the gravity system.

The proper heating and lighting are both likewise questions of architectural detail and are generally well planned and provided for, but too often not properly executed owing to the tendency to cheapen construction at the expense of properly carrying out of architectural plans and details in the interest of proper hygienic arrangement.

The furnishing and finishing of buildings is a phase of this subject I wish most to call your attention to. The inside walls should be smooth and hard, of light colored material, though not so bright as too strongly to reflect the light, should be as free from sharp corners and angles as possible, and be free from elaborate moldings, cornices, grills and other places to catch dust, and should be of such material that they may be washed or cleaned with moist cloths without injury. The floors should be very closely laid of some hard impervious material, so constructed that they may be cleansed by the liberal use of water in which a very abundant supply of some germicide is incorporated, none better than good strong, old fashioned soap. Carpets of all kinds should be avoided. There is nothing more filthy or more of a menace to good health than ordinary wool or hemp carpet, so generally the pride of church or fraternity halls whose floors are decorated by one of these elaborate carpets of beautiful design in conformity to a taste demanding

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it though in ignorance of the evil that therein lies. Let me call your attention to the conditions—one of these carpets produce. They are placed on the floor sufficiently closely laid to retain all of the dust and filth within the meshes of the carpet ready to be stirred up and floated about in the air by every foot fall. On to this carpet all manner of filth is carried by the feet of careless and thoughtless persons. Decayed animal and vegetable matter, the germ laden saliva, or the contents of some abscess teeming with pathogenic bacteria, human and animal excrements, any and all kinds of filth is carried in and wiped off the feet, left on the carpet to dry and be pulverized into dust to float about the room and lodge in the throat, lungs, mouth, stomach, eyes or any other accessible part of the body. Our only protection against their invasion is the amount of resistance in our healthy race of people. What is said about the carpets might be said with equal force about the upholstering with textile fabrics.

If anything be used in the way of covering for floors some form of linoleum properly applied, or better still rubber mats that can be easily removed and disinfected by the liberal use of hot water, soap, fresh air and sunshine. The furniture should be simple in construction, of smooth finish, all parts being easily cleaned with moist cloths and so built as to interfere as little as possible with the free circulation of the air, and if upholstered some dust proof material should be used.

It is a thoroughly proven and an undisputed fact that many of our more common form of disease are produced by forms of bacteria that will remain virulent for a long time under conditions I have described. It is a common remark that some one has taken cold, contracted pneumonia, tonsillitis, diphtheria or other disease, from attending church or other assemblies and going out at night. The truth is generally, it is fortunate the services ended so all might get out in the air thus saving them from being infected by the germs with which the air of the room was polluted.

The so-called taking cold may produce a condition favorable for the invasion of these pathogenic bacteria, thus causing diphtheria, pneumonia, tuberculosis or what not,—and not the fresh air out doors, be it night air or day air. The air is one of nature's best and most reliable germicides, and protects us from our own indiscretions and follies born of our ignorance.

THE OPSONIC THEORY.*

BY H. C. FREUDENBERGER, M. D., CLARKSBURG, MO.

Perhaps one of the most interesting subjects before the medical world to-day, from a scientific standpoint, is that of the opsonic theory. At least such has been the case with me. The subject having been discussed as it has in all the leading papers and before many medical societies, it occurred to me that perhaps an epitome of the interesting work already done along this line would be of interest to this society.

Dr. A. E. Wright, of England, has for several years been experimenting and investigating in the fields of immunity and inoculation or vaccination, and as a result of this arduous, careful, painstaking work has evolved a new theory as to how nature combats and overcomes infectious diseases. His theory in brief, as I understand it, is this:

All infectious diseases are produced by germs or microbes. Each species of microbes produces its own particular pathologic or clinical condition by gaining a lodgement in the human tissues and there setting free in the body its own specific toxin or poison. The body or organism has the power and does manufacture or produce an antidote to these disease germs when once they gain a lodgement in the organism. This antidote or chemical substance which the cells of the body manufacture, is set free in the blood and circulates through the capillaries and so comes in contact with the pathogenic germs infesting the body; and having come in contact with them has the power of so modifying them that the leucocytes (phagocytes), or scavenger white corpuscles, have the ability to destroy the germs. These particles, substances or antidotes, as I have called them, which the body elaborates in its effort to ward off disease, have been named by Dr. Wright, opsons, meaning "I prepare food for," "I prepare a dinner." If this theory as enunciated by Wright be true, the science of medicine has wrested from nature one of the greatest truths, if not the greatest yet established by that noble profession.

It seems that nature takes care that we discover her secrets only after an endless amount of work and worry. The principles making up this theory have been established one by one during the past century. The earliest germ from which it sprang, we might say, was the discovery of vaccination. The immortal Pasteur, fully realizing the importance of the germ factor in the production of disease processes, and being cognizant of the effect of vaccination on smallpox, gave it as his opinion that the day would come when we would combat all infectious diseases by vaccination. It was a number of years after this startling prophecy of Pasteur that another profound thinker appeared on the scene and formulated his theory of phagocytosis—this was Metchnikoff.

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According to this theory, when infectious bacteria gain a foothold in the body the tissues attempt to combat their entrance by sending certain white cells, (leucocytes) of the blood to the place of invasion to contest their right of entrance. These white cells, phagocytes as they are called, rid the body of the invading bacteria by filling the tissues in which the bacteria have found a lodging and engulfing them, thereby devouring and destroying them. It is a familiar sight and can be seen in the region of any inflamed area. If we examine microscopically a section of the part inflamed, we will find the tissues filled with invading germs, but along the invading zone we will also see vast clusters of phagocytes, or white corpuscles, in some of which we will see the germs just entering, in others several may have already entered, while in others the process of destruction of the deadly germ has already begun.

Metchnikoff's theory in part was true. The white corpuscles do play an important part in the role of immunity. But he was wrong in holding that the fluid portions of the blood, the serum, was indifferent or inert in the process of combating infection. For as bacteriologists, pathologists and scientists, continued to study this question they found this theory would not hold in all cases. The phagocytes were not always victorious over their enemy, the bacteria, and many times, instead of destroying and ingesting them, they themselves were overcome by the invading hosts of bacteria. This being the case the question then arose, why is it that the bacteria are now successful and now the leucocytes? To my mind no one has yet so successfully answered this question as A. E. Wright in the opsonic theory as he has enunciated it.

It seems to me that Prof. Wright in this theory combines the theory of Metchnikoff and Ehrlich. According to Ehrlich's side-chain theory the tissues of the body manufacture chemical elements which circulate in the blood plasma and form chemical combinations with the bacterial toxins, thus rendering them harmless. Neither of these theories is complete, says Wright. There is truth in each of them, but not the whole truth. The phagocytosis theory of Metchnikoff is correct in that it is the leucocyte that destroys the invading germ and thereby brings about health *from,* and immunity *to* disease; but it does not explain the process by which the germ is prepared for destruction by the leucocyte

The side-chain theory of Ehrlich is true, in that the body tissues, individual cells, elaborate a substance through the aid of which disease is warded off and immunity brought about; but this is not brought about by these substances counteracting the toxins of the bacteria, but instead, by so chemically or otherwise changing these bacteria in such a way that the leucocytes are thereby enabled to ingest them.

In accordance with Wright's theory there is a different opsonin in the blood for each kind of bacteria. One individual succumbs readily to one infectious disease, another to another; or at one time he is practically immune to a disease, while at another readily succumbs to it. This is explained on the assumption in the first case that the opsonins of one disease may be large in quantity in one individual while small in an-

other, or, in the latter, that the opsonins of one and the same disease may be large in quantity now, and small a month from now, or *vice versa.* Here, instead of saying the infectious process is more virulent, or the vital resistance less, we would say the opsonic index is below one or below normal. This Prof. Wright holds to be actually the case. The advocates of this theory hold that the leucocytes are powerless to perform the function of destroying the germs without the help of opsonins. This fact can be proven as follows:

1. Isolate the leucocytes from some freshly drawn blood and mix with living germs in a normal saline solution. Here on microscopic examination we find that the leucocytes do not attack the bacteria.

2. Now add to the mixed leucocytes and bacteria suspended in saline solution, blood serum. The phagocytic or destructive power of the leucocytes on the bacteria begins at once. In a short while many of the leucocytes will be found ingesting the bacteria. This proves that the presence of serum is necessary for phagocytic action. According to Wright, the serum produces this effect by the action of the opsonins upon the bacteria—the opsonins, like so many other compounds, being in solution in the serum. He has developed a very ingenious means of determining the opsonic power of the blood for any one disease. Suppose we desire to know one's opsonic power for tuberculosis. He tests the phagocytic power of this one's blood for tubercle bacilli. At the same time he tests the phagocytic power of the mixed blood of several normal individuals for tubercle bacilli. Say each white corpuscle in the individual's blood in a given time ingested five tubercle germs, while each white corpuscle of mixed blood ingested in the same time seven. Here the opsonic potency of the patient's blood is five sevenths, or below normal.

Now the question arises, why does not the patient overcome the malady? It is because the index is below normal. The elements which assist the leucocytes in their fight against the invaders are diminished. What shall we do? Raise the opsonic index to, or above normal and the defenders will prevail, the forces of nature will become aggressive and throw off the invading hosts.

Now is this possible in a practical way? Is it possible to raise the opsonic index to one, or above one? Say we are to treat a tuberculosis patient. His blood is tested for its opsonic index, which indicates whether his vital resisting powers are above or below normal, whether nature is advancing towards cure, or the disease process is in the ascendency. If the index is below normal, less than one, he is given a hypodermic injection of specially prepared tubercle bacilli—the bacteria having been previously rendered harmless by heat. Now the index is taken daily, and we find that for one or more days the index grows less and less—the negative phase. But finally a rise is noticed, and for perhaps a week it rises gradually higher and higher until, at its height, it is much above normal—the positive phase. As this index again falls day by day it is carefully watched. When it recedes about to normal, another in-

jection is given, and the same process is again passed through. However, with each succeeding injection the negative phase is less and less noticeable until finally we have no negative phase at all—the index growing higher and higher, until we have an index permanently maintained at normal or above normal. By this means the blood serum is kept in a condition to prepare the bacteria for destruction by the white corpuscles—that is in as high a state of opsonic power as possible—thereby aiding nature in throwing off the disease.

This principle is being put to practical application in staphylococcus infection of the skin, as in acne and boils, in tuberculosis of joints, glands, and even of the lungs, in empyema due to pneumococcus, ulcerative endocarditis due to streptococcus, and in various other infections of specific bacterial diseases. It is only applicable where the specific germ is known.

I have lately seen a very ingenious argument given for early operation for appendicitis. It was based on the principle involved in the opsonic theory. It was argued that where we operate on an individual in the interval we operate on a practically well man and make him sick. The system will be obliged to array its forces of defense, opsonins and leucocytes, to redress the surgical insult. The individual suffering from an acute attack on the other hand is in a state of preparedness for a more serious battle than that of the surgeon. To such a person the operation comes as a comparatively little thing, and if no error is made in technique, relief is immediate and convalescence speedy.

The principle is not only being used in the treatment, but also in the diagnosis of disease. Dr. O. H. Brown, of the St. Louis University medical school, has experimented largely along this line in the diagnosis of tuberculosis. He has found that where the opsonic index test indicated tuberculosis, the tubercle germs were demonstrable in the sputum with but few exceptions. Usually one test was all that was necessary to demonstrate the abnormal resistance. In not a few cases the diagnosis was made on the opsonic index findings, without regard to the microscopic test or clinical or physical findings. Two of the cases where the indices were low and no bacilli were found in the sputum, were treated with tuberculin in minimum doses and were relieved of their symptoms.

And now in conclusion, let me say, it has not been my intention in this short paper to present my own views of the practicability of the opsonic or vaccine treatment. The great interest taken in the theory by the medical profession during the last year, is my excuse for asking your attention to the paper. My intention has been to present a résumé of the theory of A. E. Wright, as I understand it, at the same time giving it in its relation to well known theories of immunity. By thus presenting it I believe it is better understood.

As a parting word, I cannot refrain from saying that I have been deeply impressed with the theory. Theoretically, it explains many things previously obscure. Practically, it will, I believe, in the near future, aid us in the diagnosis and treatment, yes, in the cure, of many ailments that have heretofore baffled us.

ADDRESS BEFORE THE SOUTHEAST MEDICAL ASSOCIATION.

BY J. L. EATON, M. D., BISMARCK, MO.

It is my purpose to speak in a general way only of the open air treatment for incipient tuberculosis and to recite a few brief facts in connection therewith, presuming that all agree that tuberculosis is a disease that should be dealt with in a rational, common-sense way and on comprehensive and systematic lines. This disease holds a very special interest for every loyal physician, not merely to arrest or cure but if possible, or as nearly as possible, to eradicate and prevent it.

All success, individual, state or national, rests upon health, and the paramount duty of every true physician is to prevent as well as to cure disease.

Health depends largely upon the amount and purity of air, the cleanliness of the home and the quality and quantity of food.

Close bed-rooms make myriads of graves. We spend one-third of our lives in bed and yet how little attention is given to ventilation. Never is an expert in sanitation consulted in the construction of our modern homes and the natural result is that we are not living as long as our grandfathers and grandmothers did. Once arriving at adult age, the average man or woman has few years of survival to expect; even during the past fifteen years, the death rate of persons over 50 has risen considerably, and this is directly traceable to our modern civilization. Bookkeepers, paper hangers, plasterers, in fact all whose occupations require them to spend their time in-doors in badly lighted and poorly ventilated buildings, have an unduly high death rate.

Therefore, the large cities with their crowded tenement districts, bad air, little sunshine, poor ventilation, are the hot beds for tuberculosis, and the large cities are now furnishing about 92 per cent. of all incipient cases that are cared for at the various sanatoria throughout the country.

Since the start of the very extensive in fact general crusade against tuberculosis, we who are more or less in close proximity to the fight, get comfort and find a new appeal in the results as well as the words spoken by ardent warriors who are struggling with the great white plague.

There has been a movement, or rather a concentration of ideas, among professional men along the line of out-of-door life within the past five years, that we ourselves are pleased, I might add almost frightened, by the tremenduous shadow which we cast. We are not only exhibiting a healthy and conservative but a remarkable growth along this line and are doing it in such a way as to influence thinking people everywhere. A new idea or system must justify itself by results; conservatism, or the unwillingness to welcome new things, has its uses. Most new things are not good and die an early death, but those which push themselves forward by their own weight and merit and force themselves upon the attention and consideration of the profession, are the un-

conscious production of experience and human wisdom and necessarily attract that honest consideration which they so richly deserve.

The first duty of the physician is to the family and patients under his control or care. There is no higher duty or greater obligation than to preserve the family, which is the fountain of patriotism as well as of virtue.

The crusade against the great white plague has deeply engaged the best thought of the best men on both sides of the Atlantic and to-day we in America are arresting or curing about 86 per cent. of incipient cases of tuberculosis that, for hundreds of years, has been the most feared, the most prevalent and most fatal of all diseases.

Hippocrates, the most celebrated physician of antiquity, 440 years B. C. described pulmonary tuberculosis as the "disease which is most difficult to treat and which proves fatal to the greatest number."

Profiting by the experience of observing, brilliant and brainy pioneers in this work, Treaudeau of New York, Brehmer and Detweiler, we have at the various sanatoria arrived at the most satisfactory solution of the problem of handling tuberculous patients in the incipient stage.

Aside from the beneficial and actual results accomplished in a well regulated and properly managed sanatorium, the educational advantages stand as the most valuable part for each patient is taught the daily life that must be led and what is known about the disease and its cure, and when he leaves the institution he is an enthusiastic walking, talking, teaching missionary in his community for open air, good diet, and rest.

Missouri physicians are deeply interested in the crusade against the great white plague; a state's health is an integral part of that state's material wealth and a very important factor in its happiness. Missouri is maintaining its position in the leading ranks of progressive states by establishing a state sanatorium for the health of its citizens—the care and cure of incipient tuberculous patients, located at Mount Vernon at an altitude of 1250 feet in the heart of the Ozarks.

The name Ozark is full of suggestion and significance. It suggests a congenial climate and a tremendous area containing unmeasured natural resources. It suggests a people of virility and patriotism, hardy and thrifty with energy and pluck unsurpassed anywhere. It suggests pure air and water, nature's cures, for in the Ozark hills water abounds possessing to the fullest extent the virtues and medicinal qualities that have made the foreign resorts famous.

The Ozarks is nature's picture gallery—views of the picturesque, the beautiful and grand, varied with forest, vale and mountain in rare and unique combination. It is here in the open air that we have a delightful, salubrious and invigorating climate, with scenic attractions that rival the Adirondacks and the Alps, the wonder and delight of all who are permitted to see its beauties and where the invalids will be tempted to linger and enjoy at leisure the pure, refreshing, invigorating and balmy breezes, and in fact remain in cheerful, happy and prosperous contentment and await complete recovery.

The splendid opportunities for incipient cases to recover in the open air of the Ozarks have in the past been overlooked, but these lost opportunities are now dim and vanishing by the throbbing fullness of an appealing present.

The Missouri State Sanatorium is a standing invitation to those unfortunates afflicted with incipient tuberculosis. Missouri physicians are responsible for this beneficent institution. The lives saved at this sanatorium are living trophies of our victories, and the joy, sunshine and happiness thereby restored to the homes of worthy Missouri citizens and anxious loved ones, must furnish one of our best rewards.

The sanatoria for consumptives in this country extend from Rutland, Massachusetts, to the Pacific Coast, Texas and New Mexico, and I might say from the northern lakes to the Gulf. The U. S. Marine Hospital service in determining a location for a sanatorium for consumptive sailors, selected Fort Stanton in New Mexico, where for several years it has been conducted with a great degree of success. What will cure a consumptive will surely not hurt a well man. It is easier to keep tuberculosis away from us than to get rid of it when we have it. Therefore our most important and immediate method of fighting the plague lies in defensive rather than offensive warfare. Therefore get the fresh air habit.

It may now be asserted that sleeping out of doors or in the open air is feasible and beneficial in all climates and in all seasons. The person who does so does not catch cold, as the uninitiated always fear, but on the contrary he becomes almost absolutely immune to colds. To come nearer to it, did you ever catch cold sleeping in an open house, or camping in a tent?

I can still vividly recall the astonishment with which I awoke in a woodman's cabin in Iron County one winter morning, twenty years ago, with one inch or more of snow over the entire bed. I awoke without a sniffle and with a feeling that I had been made new while I slept.

How we recall the healthy, massive, rugged pioneers of this country, when the open log houses were in vogue, where nature's ventilator, the big fire place, prevailed, with open floors and loose planks for a loft and the chinking out in many places. Pneumonia was at that time a seldom occurrence and tuberculosis was practically unknown.

Whoever heard of a tramp having tuberculosis; his bed is a slab or an old railroad tie, his covering is nothing less than the canopy of starry decked heaven. Get the open air habit, get the out-of-door habit. It takes time to acquire it, but when once formed you wouldn't exchange it for anything else on earth. You can't catch cold sitting in an open field or garden, from an open gate. We do, however, catch colds when we crowd into hot houses and rooms, shutting the doors and windows and thus provide a ready-made hot house for the cultivation and transmission of bacilli in all their various forms. It is there we catch cold and a constant succession of such colds implies a mode of life in which all aerial microbes are afforded abundant opportunities.

Open air or fresh air is essentially necessary under all conditions, let every breath or inhalation have no suspicion of ever having been breathed before and as a general rule the colder the weather the better the patient likes it. In the Adirondacks where every home is constructed for a consumptive home, they sleep out with the thermometer 10 to 40 degrees below zero, and derive marked benefits therefrom; plenty of warm night clothes, woolen sheets, warm mattresses of cotton, wool or feathers underneath, are all that is necessary to make one comfortable and luxurious so long as the bed is properly sheltered from the prevailing winds and properly sheltered by overhead cover. On the other hand cold air is not necessarily pure, for some of the foulest air on earth is found in seldom used public buildings that are never decently ventilated, for you have the bacilli which have lurked there since they were last aired as well as the residue of the breaths and prespiration of successive gatherings.

The only way to be sure air is pure and fresh is to feel it blowing across your face day and night. Sit or sleep in a gentle current of air all the time you are in-doors. Don't call it a draught for if you do up go hands in holy horror. Call it a current of fresh air, or a gentle breeze, then no one is afraid of it.

The open air treatment of consumption has converted us into the belief that a gentle breeze or draught is a friend instead of an enemy.

These are some of the practices that insure the best results at well governed sanatoria and the home physician, the general practitioner, must so impress the laity. Emphasize the necessity of remaining at a sanatorium a sufficient length of time to establish permanent results, in other words they should "labor to get well" as getting well is a genuine occupation of itself.

Proper individuals with incipient cases can secure most prompt results. Missouri open air will cure consumption.

There is nothing like it under the broad sunlight of heaven, the open air of the Ozarks. There is nothing quite like it on the green earth. Do you wonder that we become open air enthusiasts?

Therefore, to those predisposed to tuberculosis, the secret of longevity lies in the following ten commandments:

(1) If possible let every inhalation be above suspicion of ever having been breathed before.

(2) Get eight hours sleep and that on the right side.

(3) Keep your bedroom windows open all night.

(4) Take very moderate exercise, stopping short of fatigue.

(5) Eat nourishing diet, especially eggs and milk.

(6) Avoid intoxicants, which lessen the power of resistance.

(7) Allow no pet animals in your living rooms—they are likely to carry about disease germs.

(8) Live in the open air, preferably the country if you can.

(9) Watch the three "D's" drinking water, damp and drains.

(10) Keep your temper, limit your ambition.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, Chairman. M. B. Clopton, M. C. Shelton.

EDITORIAL

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS.

As the time draws near at hand for the opening of this World's Congress on Tuberculosis, to be held in Washington, D. C., September 21 to October 12, 1908, every nerve is being strained by those in charge to make this a gathering that will reflect credit upon the American people. Unless there are ten thousand members (meaning those who have paid their dues) the Congress will be a failure, and France and England will have the opportunity of pointing with pride to their congresses as contrasted with the one held in America.

In a letter recently received from Dr. Fulton, Secretary General of the Congress, we are informed that the pro rata membership for Missouri is 640 members. *There are now only 28!* Will Missouri, the banner state of the middle-west, sit quietly by and see herself distanced in this race? We must get our membership quota full. There is not a physician in the State who has so little influence that he can not persuade one friend to join. Let us join; or send substitutes. Let us make such a showing from Missouri that when we go to Washington on September 21st we shall be able to point with pride to the part that our State will have taken in the now universal campaign against man's greatest foe.

The problem of the prevention and control of tuberculosis should interest the general public as well as physicians. There is hardly a family in the State that has not sacrificed to this Moloch at least one victim. There is no reason why the Missouri membership should not be large. It is estimated that there are 30,000 persons in the State who have tuberculosis. Some of those should be glad to contribute their money to aid in protecting others from acquiring the disease.

A membership in this Congress has a very real value. For five dollars one not only becomes a member, with all the voting privileges, but, most important of all, he also receives the bound volumes of the transactions, the value of which will be much greater than the subscription fee. In these volumes there will be popular addresses, and the results of the latest investigations on the many phases of the tuberculosis problem. We urge the profession, most earnestly, not to let slip this opportunity to show to the world that we stand for the highest in medicine, the prevention of fatal disease.

TRIUMPHS OF PREVENTIVE MEDICINE.

Under the caption "What It Means," *Collier's* summarizes succinctly what has been done in the past, and what is now being attempted (chiefly through the efforts of physicians) to further safeguard the people against sickness, by educating the public mind to a proper realization of what diseases can be prevented through a knowledge of sanitary rules. If newspapers throughout the country would give more space to similar topics, the triumph of medicine over disease would be hastened a thousand fold. We quote the editorial in full:

"How many understand the real meaning of disease in the universe? What imagination can grasp even the direct suffering it causes, to say nothing of the indirect? How much does the decreased death-rate of children mean to women in this world? The population in the future will be kept up with a fraction of the births needed in the past. Many times fewer small children will die; the length of life for adults will be still farther extended; those who live will know infinitely less suffering. The average length of life has already been increased from twenty-one and a quarter years in the sixteenth century to forty and a half in the eighteenth. The death-rate from diphtheria has been reduced from forty or fifty per cent. to less than ten. The British in the Boer war lost from typhoid more than those killed by wounds received in battle. In the Spanish war one-fifth of the soldiers in our national encampments had typhoid, and the present situation leads experts to believe that in another war this record would be repeated. How easy it is to avoid, however, was shown by the Japanese. General Oku, in an active campaign of seven months, had 187 cases to 100,000 men. Furthermore, the Japanese learned so much between the Chinese war and the Russian war that dysentery was about one-sixth as prevalent, malaria about one one-thousandth, and the cholera cases diminished from 7,667 cases to none. Many of us are able to remember when yellow fever raged: in 1878 in Memphis, a city of 19,500 people, there were 17,600 cases of this disease, with 6,000 deaths. General Wood said that the discovery of the method of transmission of this disease resulted in the saving of more lives each year than were lost in the Cuban war. Before Jenner's discovery, smallpox killed one-tenth of all the people on the globe and disfigured nearly twice as many. Since then it has existed only because of prejudice against vaccination. In Prussia, where vaccination is compulsory, the mortality has been reduced to one in about 300,000. In Paris, on the other hand, where vaccination is not compulsory, between 1870 and 1895 there were over 20,000 deaths. Before the discovery of

Yersin's and Haffkine's serums the mortality from bubonic plague was over ninety per cent. In London alone, in 1348, 100,000 fell victims to the disease. These are a few examples which show what intelligent study means in the sum of human misery and happiness.

"Now put it into money, this same saving to the race through intelligent observation. Hunter has estimated the average cost of preparing a man for usefulness at $1,500. The loss of 400,000 workers, which occurs every year from diseases that are preventable, represents, therefore, an annual loss to the country of $600,000,000. On Hunter's estimate, the lowered death-rate of England in about ten years would mean a capital saved of $1,285,206,000. The epidemic of 1891-92 cost Philadelphia an estimated loss of about $22,000,000—to railways, hotel-keepers, merchants, manufacturers—for care of sick, loss of time, and expense of burial. A policy of prevention, on the other hand, would have cost about $700,000. The discovery of the yellow-fever mosquito is supposed to save us more money in each single year than was spent upon the entire Cuban war. If we could master tuberculosis, the saving in money in the United States would be $330,000,000 per year. Is it any wonder, then, that the best physicians are heart and soul in the study of prevention? Dr. N. E. Ditman, in the Columbia 'Quarterly' for June, has a powerful plea for a school of sanitary science and public health. To the large body of millionaires who are regular *Collier* subscribers, that essay is sincerely recommended."

RIGHT OF APPEAL FROM ACTION OF STATE BOARD OF HEALTH NOT RETROACTIVE.

Previous to 1907 there was no right of appeal from the action of the State Board of Health in cases where they revoked medical licenses. The Legislature in 1907 passed an act allowing an appeal to the Circuit Court in such cases. The part of the Act (Laws of 1907, page 361) allowing an appeal is as follows:

> " * * * * Any person whose license has been or shall be revoked by the board, shall have the right to appeal from the decree, decision or judgment of the board revoking such license. * * * *"

The license of Edward J. Hogan was revoked by the board on July 10, 1906. On May 7th, 1908, Hogan applied to the Circuit Court for a writ of mandamus to compel the board to allow him an appeal; the board having declined to certify this appeal to the Circuit Court on an affidavit filed by him shortly after the passage of the act referred to.

To sustain Hogan's petition it would have been necessary to have construed the law to be retroactive in its nature. The reply of the board to Hogan's petition was in the form of a demurrer in which it was denied that the act was of a retroactive character, and that therefore Hogan, whose license was revoked before the passage of the act, did not have the right of appeal. Judge Kinsey, of the St. Louis Circuit Court, to whose room the cause was assigned, after taking the case under consideration, on July 27, 1908, sustained the board's position and declined to grant to Hogan the relief asked for.

EDITORIAL NOTES

A MEDICAL CLUB.

The physicians of Clinton have formed a medical club for the purpose of discussing informally whatever topics may be brought up. At the first meeting, held on July 13th, one member reported a case and this was discussed. Then a question was propounded asking for a description of some organ—at this meeting it was the lymphatics. The entire procedure is free from formalities of all kinds, and encourages a disposition to study and inquiry. The plan is worthy of adoption in other communities and we shall be glad to publish information concerning the organization of other clubs of a similar character.

NEW AND NON-OFFICIAL REMEDIES.

The third edition of this pamphlet has been published by the American Medical Association. It contains the articles manufactured by pharmaceutical firms, for the use of the medical profession, which have received the tentative approval of the Council on Pharmacy and Chemistry up to March 14th, 1908. The book should have a place on the desk of every physician, for here he will find a description of the composition, actions, usages and doses of the numerous articles of a non-official character, which are prepared and marketed in accordance with the standards that the profession has established through the Council on Pharmacy and Chemistry. An alphabetical index of the articles and an index of the names of the manufacturers of the articles, are appended; but we believe an index of the diseases which may be influenced by the articles would add to the value of the book.

MISSOURI UNIVERSITY LIBRARY OPEN TO MEMBERS.

The members of the State Medical Association will in future have the privilege of consulting the books in the Library of the University of Missouri. This decision was arrived at recently by the librarian, Mr. H. O. Severance, after a conference with Dr. A. W. McAlester, Jr., the state secretary. The loan of the books to members who desire to consult them, will be made with the least possible formality, though always with due regard for the safety of the volumes. In towns where there is a public library, the books may be secured from the University of Missouri Library by making application through the local library; where there is no library the books will be sent direct to the physician making application for the loan, he, however, being required to pay carriage charges for receiving and returning the books. This is a privilege which we feel sure the members of the Association will appreciate and

promptly take advantage of to the fullest extent. The privilege is not confined to the medical library but extends to all books and periodicals in the large collection of miscellaneous works.

NEW STATE ASSOCIATION JOURNALS.

The Journal of the Oklahoma State Medical Association is the most recent addition to the number of state medical associations publishing their official transactions in journal form. The first number is a neat book of 34 pages and contains the proceedings of the House of Delegates and Judicial Council at the annual meeting on May 12th, the president's address at this meeting, and several papers read before affiliated county societies. Dr. E. O. Barker is editor of the Journal, which is published at Guthrie.

Tennessee has also adopted the monthly journal form of publishing its transactions. The first number appeared in June, under the editorship of Dr. Geo. H. Price, of Nashville. We are sure the Journal will be successful "in spreading the influence of the organized profession in the State," and in many other ways advancing and protecting the interests of the members of the Association. The Journal is published at Nashville. The first number contains a report of the proceedings of the last annual meeting of the Association.

We congratulate these two associations in having established the journal form of publishing their transactions. Under the guidance of Dr. Price and Dr. Barker these two journals will, we feel sure, add to the influence and usefulness of their respective state medical associations.

THE MATERNITY HOSPITAL IN ST. LOUIS.

The Maternity Hospital in St. Louis, organized in April of this year, is an institution which deserves and should receive every encouragement and assistance, not alone from physicians, who are ever ready to promote and advance any plan for the improvement of health conditions, but also from every person who can in any way assist in maintaining an institution for the care and treatment of women who, through poverty or misfortune, otherwise would be compelled to pass through the period of childbirth amidst unsanitary and unhealthful surroundings,—and, in the case of unfortunte girls, too often, immoral and degrading influences.

St. Louis has long needed just such an institution which, properly conducted—and a glance through the list of the Board of Managers of the Maternity Hospital assures this—will go far toward lifting poor and unfortunate mothers to a higher plane of living, a better understanding of the disease-preventing force of a few simple sanitary rules, and, haply, a larger trust in the worthiness of charitable institutions established for their benefit.

The Maternity Hospital is non-sectarian and is patterned after the plans of the Roosevelt and Sloan Maternity Hospitals in New York. A special feature, particularly appropriate in an institution of this kind and full of possibilities for good, is the convalescent ward where patients may remain until they are strong enough to support themselves. In this ward the mother and child live together and are surrounded by every influence that will favor the development of the maternal instinct. Almost all patients are charity cases but there are a few rooms for the use of those persons who are able to pay a nominal sum for the privacy thus afforded. The medical staff is composed of well-known physicians who attend the patients without charge. The hospital is located at 2621 Locust street.

NEWS NOTES

Dr. T. C. Allen, Bernie, Mo., Councilor for the 23d District, has returned to his home after an eight weeks' trip in the Rocky Mountains, on the Pacific Coast and in Old Mexico.

The twenty-first annual meeting of the Medical Society of the Missouri Valley will be held at Council Bluffs, Iowa, under the presidency of Dr. W. F. Milroy, on September 3d and 4th, 1908.

Dr. F. L. Whelpley, formerly assistant physician at the Insane Hospital, St. Louis, has been appointed assistant physician at the City Dispensary, and Dr. F. W. Klocke has been appointed junior physician at the City Hospital, St. Louis.

The regents of the University of Utah have decreed that no teacher, student or employe, shall in future be admitted to the class rooms or buildings of the university. According to the press dispatch from which we glean the information, this action was taken following upon the death from tuberculosis of a teacher in the institution.

Dr. H. W. Wiley, the head of the Bureau of Food and Drug Inspection of the Department of Agriculture, will undertake a comprehensive investigation of baby foods.

The basis for the baby food campaign is understood to lie in the fact that many mothers have written to the Bureau of Food and Drug Inspection that their children have failed to thrive on the preparations and in some instances have died after a diet of some much-advertised concoction.—*(Scientific American.)*

The dispensary service of the Health Department of St. Louis has been extended by the establishment of two new branch dispensaries, one located at 4919 Easton avenue, in the northwestern part of the city, and one at 907 Manchester, in the southwestern section. Branch dispensaries in the extreme north and south sections of the city have been in existence for several years. Ambulance service is continuous at all branch dispensaries. The physicians in charge of the two newly established branches are Drs. Sam Bassett and S. T. Lipsitz, at Branch No. 3, and Drs. Albert Vogel and C. M. Barr at Branch No. 4. The hours of service at the branches are 7 a. m. to 11 p. m. daily.

At the annual meeting of the Oregon State Medical Association, which convened in Portland, July 1 to 3, the president, Dr. Coffey, approved the recent movement which has resulted in the reduction of the number of medical colleges in this country, recognizing that in this way the standard of those institutions worthy of patronage has been materially raised and that many schools of a low order have at the same time been forced to close their doors. Dr. Coffey recommended that a committee be appointed by the Oregon State Medical Association, with instructions to devise means of bringing about a consolidation of the two medical colleges in Oregon. He also recommended the establishment of a medical journal which should be the representative organ of the state medical associations of Washington, Oregon and Idaho, this journal to be controlled jointly by three state organizations. Such a change, *Northwest Medicine* thinks, will involve the consolidation of the two journals in Oregon—*Northwest Medicine* and the *Medical Sentinel.* Dr. Coffey recommended that a committee be appointed to confer with the other two state associations concerning the advisability of adopting such a course and the feasibility of carrying out the plan and report at the next annual meeting. The Association acted upon the recommendations and appointed the committees as suggested by the president.

New Members Missouri State Medical Association.

Andrews, John, Grant City.
Bankhead, C. L., Paynesville.
Bartlett, E. M., Clarksville.
Bewig, Henry W., 802 Salisbury Ave., St. Louis.
Black, Wm. D., 219 Metropolitan Bldg., St. Louis.
Bribach, Benno, 7608 Michigan Ave., St. Louis.
Brown, George, Edina.
Brown, Wm. G., Triplett.
Buechler, J. L. A., Freeburg.
Cooney, Daniel C., 4205 Finney Ave., St. Louis.
Crawson, Egbert, Gaynor City.
Craddock, Frank P., 3029 Washington Ave., St. Louis.
De Long, S. W., Brooklyn.
De Long, W. B., Andover.
Dorsey, Benj. L., 1422 N. Taylor Ave., St. Louis.
Ehrhardt, Rudolph T., 301 Century Bldg., St. Louis.
Fischel, Walter, Humboldt Bldg., St. Louis.
Fox, Sylvester D., Mo. Pacific Hospital, St. Louis.
Gettys, Henry B., 2601 Washington Ave., St. Louis.

Glaser, Martin J., 1825 S. Jefferson Ave., St. Louis.
Hardin, R. W., Louisiana.
Harlan, Warren E., 1719 Market St., St. Louis.
Hearst, Allen L., Mernin.
Holman, J. H., Humansville.
Home, L. O., Linneus.
Hughes, Charles H., 518 Metropolitan Bldg., St. Louis.
Johnson, Walter L., 2144 S. Grand Ave., St. Louis.
Lawhorn, G. W., Forest Green.
Lewis, Charles, 1312 Monroe St., St. Louis.
Luman, F. E., Baring.
MacDonald, John W., 1111 N. Grand Ave., St. Louis.
Maupin, R. E., Shelbyville.
McClure, James, 1704 Market St., St. Louis.
McLaughlin, J. A., Aldrich.
Metcalf, N. E., Maplewood.
Meyers, W. T., Aldrich.
Mitchell, A. W., Humansville.
Myers, James, Greensburg.
Nervins, James A., North Salem.
Newlove, John S., Butler.
Nixon, Wm. A., 419 Shukert Bldg., Kansas City.
Parman, David R., 4473 Delmar Ave., St. Louis.
Pearson, D. W., Louisiana.
Pohlman, Frederick L., 2323 N. Market St., St. Louis.
Reinders, Otto W., Mercantile Trust, St. Louis.
Reynolds, S. H., Maplewood.
Roberts, J. M., Green City.
Rusk, Elizabeth M., 4241 Delmar Ave., St. Louis.
Russell, R. Lee, Humansville.
Schmidt, William Carl, 2417 S. Broadway, St. Louis.
Scott, Elijah A., 1700A S. Broadway, St. Louis.
Sheets, Martin E., 4359 Chouteau Ave., St. Louis.
Shotwell, Richard, Curryville.
Sieving, Gustav W., 3601 S. Jefferson Ave., St. Louis.
Stevens, Charles D., 1749 S. Grand Ave., St. Louis.
Stone, J. M., Laredo.
Tanquary, James H., 930 Belt Ave., St. Louis.
Terry, Robert J., 1806 Locust St., St. Louis.
Tidwell, G. W., De Soto.
Towles, S. P., Jacksonville.
Urban, E. T., 3156 Park Ave., St. Louis.
Wall, Otto A. Sr., 4532 Virginia Ave., St. Louis.
Varner, A. O., Union Star.
Walters, F. E., Bowling Green.
Weber, Frank, Flat River.

New Members From Missouri of the American Medical Association.

Beckham, Genevieve S., St. Louis.
Bellows, G. E., Kansas City.
Banker, O. H., St. Louis.
Burke, C. L., Kansas City.
Child, S. P., Kansas City.
Coffey, W. H., Kansas City.
Epperly, R. G., Prairie Hill.
Esselbruegge, F. C., St. Louis.
Ferguson, J. W., St. Joseph.
Gray, A. L., St. Joseph.
Hale, J. W., Greenville.
Harris, D. L., St. Louis.
Humfreville, D. L., St. Joseph.
Kern, B. C., St. Louis.
Kessler, S. F., St. Joseph.
Leavy, C. A., St. Louis.
McKillip, O. L., Kansas City.
McMurry, M. C., Paris.
Neer, C. S., Springfield.
Newman, S. A., Cassville.
Owens, M. J., Kansas City.
Parce, A. D., St. Louis.
Parker, H. F., Warrensburg.
Payne, H. C., Paris.
Redwine, J. T., Doniphan.
Roselle, T. A., Palmyra.
Sanford, S., Palmyra.
Schmid, W. F., St. Joseph.
Sheley, O. C., Independence.
Smith, J. D., Shelbina.
Smith, W. P., Troy.
Sneed, C. M., Jefferson City.
Straus, Leon, St. Louis.
Swahlen, P. H., St. Louis.
Tout, B. B., Archie.

OBITUARY

JOHN F. REILEY, M. D.

Dr. John F. Reiley died of apoplexy at his home in West Plains, Mo., on June 17th, 1908, after one week's sickness. He was born in Kentucky, October 30th, 1871, and with his parents moved to Howell county, Mo., in October, 1886. His early life was spent on a farm, and although his education was limited to the advantages afforded by the common schools, he succeeded in fitting himself for teaching, and in 1893 was elected county school commissioner for Howell county. He obtained his medical degree from the Missouri Medical College in 1896, and immediately located in West Plains where he entered the practice of his profession and remained to the time of his death. For years he had been a member of the Missouri State Militia; he enlisted as a private in 1899, gradually rising from the ranks until, at the time of his death, he held the rank of major in the medical department of the Sixth Regiment, N. G. M.

Dr. Reiley was an energetic, ambitious young man, and by his untiring efforts had established a fine practice, and occupied an enviable position in the affairs of his community. His untimely death is deeply regretted.

COUNTY SOCIETY NOTES

CASS COUNTY MEDICAL SOCIETY.

Cass County Medical Society met at Harrisonville July 2, 1908. In the absence of the president, Dr. Ramey, of Garden City, called the meeting to order.

Dr. Balliett's paper "Placenta Previa," was discussed and cases reported, all of which proved very interesting.

Dr. Adair gave an interesting account of the Chicago meeting of the American Medical Association.

Dr. Overholser, as councilor, reported the proceedings of the Missouri State meeting held at Springfield.

Special efforts were recommended to induce members to attend meetings by making the meetings more interesting, and also efforts were made to induce eligible physicians to come into the Society.—J. S. Triplett, M. D., Secretary pro tem.

DAVIESS COUNTY MEDICAL SOCIETY.

The third quarterly meeting of the Daviess County Medical Society was held in Gallatin July 7th. This was a public meeting and the laity was invited to be present. The great interest shown by the large audience was a surprise to us.

The meeting was called to order by Dr. W. L. Brosius, president, and the following papers were read:

"The National Tuberculosis Congress and Its Work," by Dr. Charles Pipkin; "Tuberculosis a Communicable Disease," by Dr. N. M. Wetzel; "Sanitation and Tuberculosis," by Dr. James T. Hedrick; "The Early Diagnosis of Tuberculosis," by Dr. D. F. Hanna. These papers were discussed by the physicians and several of the audience.

At 7:30 p. m. Dr. J. M. Allen of Liberty, talked to a large audience on "Tuberculosis and Public Hygiene." He spoke of the early struggles of the profession with deadly diseases, the causes of which were unknown, and the equally deadly work of the surgeons before the day of antiseptics. He reviewed the investigations of Jenner, Pasteur and Koch, and unfolded the results of scientific investigation in establishing the part played by bacilli in the transmission of disease; showed how the malignancy of smallpox was destroyed by inoculation, diphtheria robbed of its terrors by antitoxin, and, while waiting for a specific serum to counteract tuberculosis, that the knowledge of the existence of these germs and the environment absolutely requisite to their existence, makes possible the creation of proper surroundings for the patient's safety and recovery. He spoke of the influence of heredity which he believes to be an entity transmitted from parent to child, making a fertile field for the

tuberculous germ. He urged more attention to isolation of the tuberculous member of a family, that indiscriminate spitting and kissing (of babies) should cease, that more attention should be given to the disinfection of our homes, churches and school houses. Enough statistics were injected into the lecture to astonish and please the hearers with the accomplishments of the Association for the Relief and Control of Tuberculosis, and educative good must of necessity follow this meeting. —M. A. Smith, M. D., Reporter.

GREENE COUNTY MEDICAL SOCIETY.

MEETING OF JUNE 19TH.

Dr. W. M. Smith lectured on "General Medicine" in the Post-Graduate Course.

MEETING OF JUNE 26TH.

Dr. J. C. Matthews, at the request of the State Board of Health, called the Society's attention to the supposedly irregular and criminal practices of three practioners of medicine in Greene county. A general discussion ensued and Dr. C. B. Elkins (an ex-Member of the State Board of Health) said that, according to his experience, the Board could do nothing unless the local society could furnish absolute and unimpeachable evidence sufficient to prove the guilt. The matter was referred to the Committee on Public Health and Legislation. The subject for scientific discussion was a paper on "Intestinal Diseases of Children," by Dr. W. P. Patterson.

MEETING OF JULY 10TH.

Dr. O. N. Carter read an interesting paper entitled "Acute Dysentery" and said in part: "This is an inflammatory disease of the large intestines, usually of bacterial origin, and due to a lowered resisting power of the patient. The disease may start with a diarrhea, or commence suddenly and soon terminate fatally. The prognosis depends, in a great measure, on the age and condition of the patient as well as the severity of the attack. Rest in bed is of the greatest importance; rectal irrigations have proven most beneficial in his practice and should be used at the outset, often and until the fluid comes away clear. At first he usually gave a hypodermic of morphine and atropine and calomel until the bowels are well cleared out; then, if necessary, opium to relieve the tenesmus. Ipecac may be given for its muscular sedative and secretory stimulant effect, sulphocarbolate of zinc may be used as a disinfectant in the form of dysentery due to the bacillus dysenteriæ, anti-dysenteric serum has been very favorably reported on.

Drs. Miller, Willier, Farnsworth, Smith, Fulton, Cox and Moore discussed the paper.

Dr. Willier reported an interesting case of typhoid fever which, notwithstanding the best of treatment and surroundings, terminated fatally in seven days.

The Society then adjourned for the summer vacation until September 11th.—J. L. Ormsbee, M. D., Secretary.

HARRISON COUNTY MEDICAL SOCIETY.

The Harrison County Medical Society met in regular quarterly session at Ridgeway, June 30th. This was a public meeting, a sort of A B C program having been arranged for the benefit of the laity.

The audience was large and enjoyed the papers and discussions, which were interesting. The doctors present were Drs. A. H. Vandivert, H. E. Gwinn, C. A. Mitchell, W. B. DeLong, S. W. DeLong, A. W. Williams, W. H. Wiley and Jas. H Morroway

There were a few changes in the program on account of some of the doctors and others being absent, but on the whole the meeting was, as remarked by an enthusiastic visitor, a "dandy."

A copy of the program is published below and may serve as an example of what can be done to interest the people. This program was given wide circulation through the courtesy of our various county newspapers.

Address of Welcome, by Rev. L. C. Powell; The History of Medicine, by Dr. C. A. Mitchell; The History of Surgery, by Dr. A. H. Vandivert; Bacteriology, by Dr. J. H. Morroway; Medical Science, by Dr. M. H. Eades; Famous Medical Men, by Dr. A. W. Williams; Reading, by Miss Ada Pontius; The Ministry and Medical Profession, by Rev. W. H. Hobbs; Relations of the People to the Doctors, by Dr. W. Swint; The Eye, by Dr. G. E. Gwinn; Care of Children, by Dr. C. H. Robertson; The Child in the Schoolroom, by Prof. E. M. Brooks; School Sanitation, by Prof. Mark Burrows; Nursing in Sickness, by Dr. F. H. Broyles; Miscellaneous Remarks, by Dr. W. H. Wiley.

The meeting was called to order at 2:30 p. m. and the attention of the audience was maintained throughout till 5:30, when signs of restlessness became manifest, so it is submitted as a suggestion to others contemplating such meetings not to make them too long.

In the address of welcome, Rev. Powell spoke of the visions of young men and the dreams of old men, and predicted a roseate future for everything,—characteristic of his usual happy style and optimistic nature. His remarks caused the members of the medical society to girt themselves for still harder battles. Dr. W. S. DeLong responded and apparently surprised some of the public when he told of our altruism.

Rev. Hobbs spoke feelingly and expressed two views which should be more generally put in practice. First, if as a people we are to enlarge and broaden we must have consideration for others, particularly the professions, and the people with whom we deal. Secondly, what we want is the best principles to actuate us all,—not too much policy, for we must be firm and strong to make the best of all; and as physicians strive for the best, they should therefore be given consideration by the people.

Prof. Brooks called attention to the healthful social signs in regard to the development of the child, and further demonstrated the need for this in a paper that was thoroughly practical.

Dr. Wiley remarked on all the papers and then a general discussion was entered into, after which a business session was held.

Dr. S. W. DeLong of Brooklyn, was admitted as a member of the county society.

A vote of thanks was extended to Rev. Powell for courtesies shown, and likewise to the newspapers of the county for their kindness in publishing the program in their columns. All in all this meeting made an excellent impression.

After adjournment the members of the society and those who participated in the program, with their wives repaired to the Central Hotel and enjoyed a repast.

Dr. W. B. DeLong spoke on the importance of being a member of the society. This had been impressed upon him, he said, when he had contemplated moving to Minnesota some time ago, and corresponded with the Minnesota State Board; one of the questions they were particularly anxious to have answered was, whether he was a member of the county medical society, and requested him to secure vouchers from the officers of said county—evidently the most reliable passport.

The next meeting will be held at Bethany, Mo.—Jas. H. Morroway, M. D., Secretary.

HOLT COUNTY MEDICAL SOCIETY.

The Holt County Medical Society met at Mound City July 2. Dr. J. F. Chandler read a paper on "Appetite—The Loss of." Dr. E. Kaltenbach read a paper on "Sour Milk as a Food." Dr. W. S. Wood read a paper entitled "Gastro-Enteric Fever (Acute)."

The members of the Society residing in Mound City entertained the Society at a dinner at Hotel Gladstone.

The next meeting will be held at Oregon, on the second Thursday in September.—J. F. Chandler, M. D., Secretary.

POLK COUNTY MEDICAL SOCIETY.

The Polk County Medical Society met at Bolivar July 14th, with the following members present: Drs. J. E. Loafman, R. W. Paris, S. W. Cossins, A. J. McLaughlan, W. S. Hopkins, A. P. Mitchell, J. F. Roberts and A. W. Mitchell. Dr. A. W. Mitchell was elected a member of the society.

Dr. R. W. Paris reported an interesting case of diarrhea in children treated successfully. Drs. Cossins and Loafman also reported similar cases. These cases were discussed by Drs. Mitchell, Hopkins, Roberts, Cossins and McLaughlan. Drs. Mitchell and Cossins reported cases of toxic symptoms in children, resulting fatally, due to ptomain poisoning following improper diet. Dr. Cossins reported a case of double hydrocele and ascites and the treatment adopted. Dr. McLaughlan reported a case

of cystocele, also one of cardiac trouble with marked cyanosis and albuminuria. Dr. J. E. Loafman read an interesting annual address to the society.

On motion it was requested that the address be given to the local papers for publication. After transacting some business matters, the society adjourned to meet on the second Tuesday in August.—J. F. Roberts, M. D., Secretary.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

Regular meeting Wednesday evening, June 10, the president, Dr. H. S. Forgrave, in the chair.

Dr. Lee called the attention of the society to the International Congress on Tuberculosis, in Washington, in September, and urged action on the part of the Society in stirring up interest in this work. He suggested that the city and board of health, as well as the Society, appoint delegates to the Congress.

The program of the evening consisted of reports from the recent Chicago meeting of the American Medical Association, and proved a most interesting and instructive session. Dr. Daniel Morton presented a synopsis of the Surgical Section; Dr. Gray reviewed the Medical and Obstetrical Sections, while Dr. Bell gave an abstract of the proceedings of the Gastro-Intestinal Association, which was held in Chicago at the same time. Impressions of the meeting were given by Drs. Gleaves, Wallace, Kessler, Fassett and others.

Dr. E. A. Donelan, St. Joseph's oldest living practitioner, celebrated his eighty-fourth birthday, July 9th, at his home, surrounded by his dearest friends and colleagues. Those who called to pay their respects to the nestor of the profession, found the doctor seated on his pretty lawn, surrounded by flowers and palms, the grounds and porches being lighted by Chinese lanterns, while refreshments were served on the east gallery.

Dr. Donelan was secretary of the first medical society organized in St. Joseph in 1860, and has been prominent in medical organizations ever since. He has served a number of terms in the State Legislature, and was active in his support of medical and educational laws.

Dr. Donelan was one of the founders of the College of Physicians and Surgeons of St. Joseph, which was merged with the Ensworth College nearly a quarter of a century ago, and for many years taught in the latter institution. He was for ten years president of the School Board, and was later appointed medical examiner of the schools, which position he now holds. Dr. Donelan bears the burden of age and service remarkably well, and continues to attend to his duties in the schools, and enjoys communion with his friends. Many interesting stories of the hardships of pioneer days are told by Dr. Donelan, whose memory is most reliable and active. His first visit to St. Joseph was in 1848, and while here he stood on the bank of the Missouri and watched the westward flight of the "pony express," that carried the mail to California.

It is pleasant to contemplate the acts of men, who prompted by a sense of duty go through life unselfishly and honorably, and it is fitting that such deeds of valor and courage should be recognized and honored, while they live, by those who follow in the pathway of the pioneers who blazed the way. This sentiment was most effectively brought out by Dr. Jacob Geiger, who acted as chairman of the evening. Dr. T. H. Doyle related some interesting episodes during the early days when he was a partner of Dr. Donelan. Other speakers testified to the high character of the venerable host, and to the inspiration his active life has ever been to the younger generation. Those who spoke were Drs. T. E. Potter, C. R. Woodson, Chas. Wood Fassett, H. W. Westover, Rev. Henry Eckel and Mr. Jos. McEvoy.

Dr. P. I. Leonard on behalf of the St. Joseph-Buchanan County Medical Society, presented Dr. Donelan with a Turkish leather rocker. Dr. Leonard said:

"Mr. Chairman and Gentlemen:

"Before presenting this material manifestation of the good will and friendship of the members of our Society, I wish to say that I fully agree with the many kind words spoken in praise of the life-work of our esteemed colleague, Dr. Donelan, I wish to say that we are not here as a matter of conventionality, but because we feel deeply that in honoring the nestor of our profession, we pay a deserved tribute to one of Nature's noblemen. In looking back over the career of such a man we can truthfully exclaim: 'Well done, thou good and faithful servant.'

"Not so many years ago, men did not meet to do honor to one who had distinguished himself by some useful service to mankind, on account of intense religious or political bias, and it remained for posterity to do him honor. Gentlemen, if we have any roses to scatter, let us do so while our benefactors are still among the living. Let us enrich the beautifully colored sunset of a life spent for the welfare of others, by this demonstration of honor. Without sentiment, life were barren, and it is just such occasions as this that makes us all better and happier men. In presenting this chair, we hope that you will be able to rest in it for many, many years, always comforted with the thought that your colleagues wish you all the happiness possible in this world. Again, let me say, that we appreciate the services you have rendered to medicine and to humanity."

Dr. Donelan responded feelingly, and thanked the donors for their evidence of esteem.

The St. Joseph-Buchanan County Medical Society has adjourned for its summer vacation. Meetings will be resumed September 9th.—

Chas. Wood Fassett, M. D., Secretary.

ARTICLES APPROVED BY THE COUNCIL ON PHARMACY AND CHEMISTRY.

IODIPIN 25 PER CENT.

A preparation similar to Iodipin, but intended for hypodermic administration.

Dosage.—2 to 6 Cc. (30 to 90 minims) by hypodermic injection. This article is also marketed in the form of capsules, each containing 2 Gm. of iodipin 25 per cent. Prepared by E. Merck, Darmstadt. (E. Merck & Co., New York.)

IODOFORMOGEN.

A nearly odorless mixture of iodoform and albumin.

Actions and Uses.—Its action is that of iodoform, which is slowly liberated in connection with wound surfaces, making the action more persistent. It limits secretion, favors granulation and promotes drying. Iodoformogen is recommended as a dusting powder for ulcerated surfaces. Dosage.—Being about three times as voluminous as iodoform, it is usually applied undiluted to the affected parts. It may be used as a snuff in ozena, mixed with an equal amount of boric acid. Manufactured by Knoll & Co., Ludwigshafen a. R. and New York.

IODOTHYRINE.

Iodothyrine is a milk sugar trituration of the active principle of thyroid gland, 1 Gm. representing 1 Gm. of fresh gland and containing 0.0003 Gm. of iodine.

Actions and Uses.—It is similar in action to Glandulæ Thyroideæ Siccæ, U. S. P., but it is claimed to possess the advantage of more definite strength and absence of decomposable extraneous matter. Dosage.—Adults, 0.6 to 2 Gm. (10 to 30 grains); children, 0.3 to 1 Gm. (5 to 15 grains) per day. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). E. Merck, Darmstadt (Merck & Co., New York).

ISOFORM POWDER.

Isoform powder is a mixture of para-iodoxy-anisol, $C_6H_4(OCH_3)$ (IO_2) $1:4=C_7H_7O_3I$, an iodoxy-derivative of anisol, with an equal weight of calcium phosphate.

Actions and Uses.—It is a germicide and antiseptic in consequence of its oxidizing power and, in contradistinction to iodoform, it acts not only in a medium free from oxygen, but in conjunction with free access of air. It is claimed to be non-toxic in comparatively large doses and to be absolutely non-irritant to the unbroken skin. It is recommended as a substitute for iodoform. Dosage.—Internally, 0.65 to 2 Gm. (10 to 30 grains) per day. It is used externally as a dusting powder, as a paste with glycerin, as ointments, suspensions in glycerin, gauzes, etc., in strength varying up to 10 per cent. of pure isoform. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

ISOPRAL.

Isopral, $CCl_3.CHOH.CH_3=C_3H_5OCl_3$, is 1,1,1-trichlor-2-propanol.

Actions and Uses.—Isopral resembles chloral in its action, but is effective in smaller dose. It is prompt in effect and apparently devoid of cumulative action. It has some degree of local anesthetic power. It may be used as a substitute for chloral hydrate and is serviceable as an alternative in cases in which it is necessary to give hypnotics for a long time. Dosage.—0.3, 0.6 to

1 Gm. (5, 10 to 15 grains) in capsules or wafers which should be dispensed in a well-stoppered glass vial. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

KASAGRA.

A fluidextract said to conform in drug strength to the requirements of the U. S. Pharmacopeia for fluidextracts. It is prepared with especial care, the drug being extracted with a menstruum containing no alcohol. The preparation is said to contain 0.05 per cent. of alcohol.

Actions and Uses.—Kasagra is recommended as an especially palatable preparation of cascara, owing its laxative effects to this drug alone. Dosage.—1 to 2 Cc. (15 to 30 minims) four times a day, half an hour before meals and at bedtime. Prepared by F. Stearns & Co., Detroit, Mich.

KOLA, STEARNS.

Each 30 Cc. (1 fluidounce) is said to represent 31 Gm. (480 grains) of fresh kola nut. It contains 23.5 per cent. of alcohol.

Actions and Uses.—Kola seeds contain from 1.5 to 3.6 per cent. of total alkaloids, of which from 1-100 to 1-40 is theobromine and the rest is caffeine. About one-half of the caffeine is combined as kolatannate of caffeine. The actions and uses of the remedy are essentially the same as those of caffeine. It is probable that the kola-tannate is not so active as free caffeine. Dosage.—2 to 4 Cc. (½ to 1 fluidram) three times a day. Prepared by Frederick Stearns & Co., Detroit, Mich.

KRESAMINE.

A clear watery solution of 25 per cent. of trikresol (which see) and 25 per cent. of ethylene-diamine.

Actions and Uses.—Kresamine is a powerful bactericide, with a claimed minimum of toxicity. It is said that the bactericidal effect of the cresol and its power of penetrating the animal tissues are greatly enhanced by the presence of ethylene-diamine and it is claimed to be far less irritating when used as a wet dressing than other antiseptics. It is useful in all cases where an active bactericide is required and particularly when the microbes are in an albuminous menstruum. The preparation is not so dangerous as carbolic acid. It has been recommended for the treatment of ulcers, eczema, lupus and other skin affections. Dosage.—It is used only in dilutions (2 to 25) containing 2 per cent. or less of each of its active constituents. Kresamine may be applied in the form of ointment. A dilution containing 2 per cent. of each ingredient was formerly marketed under the name of "Ethylene-diamine Trikresol Solution." This was used without dilution. Prepared by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York).

LAC BISMO.

A mixture said to consist of bismuth hydroxide and bismuth subcarbonate, suspended in water, in a finely divided state, and containing 0.16 Gm. (2½ grains) of the salts in 4 Cc. (1 fluidram).

Dosage.—4 to 16 Cc. (1 to 4 fluidrams) as directed. Prepared by E. J. Hart & Co., Ltd., New Orleans, La.

LACTOPHENIN.

Lactophenin, $C_6H_4(OC_2H_5)$ $(NH.CH_3.CHOH.CO)=C_{11}H_{15}NO_3$, is a compound differing from acetphenetidin (phenacetin) in that the acetic acid group is replaced by the lactic acid group, $(CH_3CHOH.CO)$.

Actions and Uses.—The effects of lactophenin are similar to those of acetphenetidin (phenacetin), over which it possesses the advantage of greater solubility in water. Dosage.—0.5 to 1 Gm. (8 to 15 grains), in wafers or capsules. Manufactured by Chem. Fabrik, vorm. Goldenberg, Geromont & Co.

[TO BE CONTINUED.]

BOOK REVIEWS

500 Surgical Suggestions: Practical Brevities in Diagnosis and Treatment. By Walter M. Bickner, B. S., M. D., Surgeon to Mt. Sinai Hospital, Editor-in-Chief *American Journal of Surgery,* New York, and Eli Moschcowitz, A. B., M. D., Assistant Physician Mt. Sinai Hospital, Associate Editor *American Journal of Surgery,* New York. Second Series. Surgery Publishing Company, 92 William street, New York.

These practical brevities are observations taken here and there from the authors' own surgical experiences, and contain many useful suggestions.

Medical Gynecology. By Howard A. Kelley, M. D., Johns Hopkins University, Baltimore, Md. In one volume. Sold by subscription. Price $6.00. D. Appleton & Co., New York.

Medical Gynæcology by Kelley, covers its allotted field in a most commendable manner. Although thorough and complete in every respect, it does not weary the reader by lengthy elaborations of minor and insignificant details and technicalities—a fault too common in our medical books of to-day.

The chapters devoted to infancy and girlhood merit special praise, being handled in a most efficient manner. The system followed out in dealing with the various considerations of the subject seems perfect; the brief epitome at the head of each chapter is most convenient.

The proficiency attained in this volume has not been surpassed or equaled by any other authority on the subject, hence the book is most reliable, valuable and thoroughly modern; it richly deserves the greatest praise from all physicians interested in this great special field of general practice. J. R. B.

Roentgen Rays: and Electro-Therapeutics: with a Chapter on Radium and Phototherapy. By Mihran Krikon Kassabian, M. D., Director of the Roentgen Ray Laboratory of Philadelphia Hospital. J. B. Lippincott Co., Philadelphia.

A study of this work will give one a good working knowledge of electricity in its therapeutic uses.

The author begins with the "Elementary Principles of Electricity and Magnetism." He treats of faradic and galvanic electricity, the uses of static machines, x ray coils and high frequency currents, of the methods of producing the x ray and its application as a diagnostic and therapeutic agent. His style is lucid and can be readily understood. Altogether this work appeals to one as a very valuable contribution to the subject.

International Clinics. Eighteenth Series. Vol. II. J. B. Lippincott Co.

Dr. Edward Turton of Hull, contributes a long article on "Two Years' Experience of Treatment by the Inoculation of Bacterial Vaccines." At first Turton regulated the treatment by means of the opsonic

index. This he soon gave up as too tedious and really unnecessary. In infections by bacillus coli communis good results were obtained, but one is surprised not to find any note made of the very marked reaction generally present soon after the vaccine is injected. No effect was obtained in epidemic cerebro-spinal meningitis. In streptococcic infections the author advises early and frequent injections, at intervals of 2 to 5 days, if any benefit is to be obtained. On the whole Turton's experiences have been favorable.

Drs. Vaillard and Dopton of Paris, discourse on "The Serum Treatment of Bacillary Dysentery." The serum used was obtained from horses inoculated with Shiga's bacillus. As a rule the patients feel better a few hours after the serum is injected; abdominal pain, tenesmus and straining diminish and, except in very grave cases, disappear almost always during the following twenty-four hours. The stools cease to be bloody and rapidly diminish in frequency. Cases of average severity are cut short in 36 to 48 hours.

Dr. J. B. Roberts of Philadelphia, reports some experiences in plastic surgery. Anything which he says on such a subject is well worth attention.

Dr. C. G. Cumston of Boston, in his capacity as surgeon to the Floating Hospital for children, has much experience in many rare conditions. He contradicts the received notion that the fatty capsule does not exist in children. It is more developed in girls than in boys and consequently perinephric abscesses are more common in the female. The fatty capsule is best developed at the upper and especially at the lower renal region.

Dr. Cumston's paper on Perinephric Abscess in Children is most interesting and instructive.

P. Lockhart Mummery of London, discusses "The Symptoms and Diagnosis of Cancer of the Large Intestine." This is a favorite subject with Mummery and his experience is large.

On the whole Vol. II. Eighteenth Series, International Clinics, is good. J. F. B.

NEW EDITION OF GRAY'S ANATOMY.

Gray's Anatomy has maintained a leading rank in its own field since its original publication fifty years ago and hundreds of thousands of copies have started students at the beginning of their course in medicine. The announcement of a new edition of "Gray" is therefore of primary importance to everyone concerned with medicine, whatever be his stage or station in medical life.

This new edition, soon to appear, is the result of a thorough revision begun two years ago. In this work, Professors J. Chalmers Da Costa and Edward Anthony Spitzka, who occupy, respectively, the chairs of Surgery and of Anatomy in the Jefferson Medical College of Philadelphia, have been associated. Dr. Spitzka has rewritten what has heretofore been the most complex and difficult portion of anatomy, the Nerve System, illustrating it with seventy of his own drawings, so that that subject of recently revolutionized development is at once brought to date and simplified. The possessor of the new "Gray" will have the best issue in which this superb book has ever appeared.

MISSOURI STATE MEDICAL ASSOCIATION.

Next Annual Meeting, Jefferson City, May 18, 19, 20, 1909

President: A. R. KIEFFER, St. Louis.
Vice Presidents:
D. B. FARNSWORTH, Springfield; W. J. FRICK, Kansas City; J. B. NORMAN, California; C. H. DIXON, Holliday; M. A. SMITH, Gallatin.
Secretary: A. W. McALESTER, Jr., Kansas City.
Assistant Secretaries: WILLARD BARTLETT, St. Louis; W. R. PATTERSON, Tipton; T. McLEMORE, Nevada.
Treasurer: J. FRANKLIN WELCH, Salisbury.

Medical Section.

Chairman: E. E. GILMORE, Adrian. Secretary: W. R. PATTERSON, Tipton.

Surgical Section.

Chairman: PAUL Y. TUPPER, St. Louis. Secretary, WILLARD BARTLETT, St. Louis.

Eye, Ear, Nose and Throat Section.

Chairman: J. H. THOMPSON, Kansas City. Secretary, T. McLEMORE, Nevada.

ORATORS.

Oration on Medicine:

R. H. GOODIER, Hannibal.

Oration on Surgery:

F. J. LUTZ, St. Louis.

COMMITTEES.

Committee on Scientific Work.

E. E. Gilmore, W. R. Patterson, Paul Y. Tupper, Willard Bartlett, J. H. Thompson, T. McLemore.

Publication Committee.

W. B. Dorsett, Chairman; M. B. Clopton, M. C. Shelton.

Committee on Public Policy and Legislation.

H. E. Pearse, Chairman; R. M. Funkhouser, F. R. Newberry.

Defense Committee.

F. J. Lutz, Chairman; W. B. Dorsett, Joseph Grindon.

Committee on Medical Education.

B. M. Hypes, Chairman; C. M. Jackson, O. B. Campbell.

Committee on Tuberculosis.

E. W. Schauffler, Chairman; Geo. Homan, J. R. Lemen, W. E. McKinley, J. R. Boyd.

Missouri Society of Medical Secretaries.

President, Foster W. Burke, Laclede; First Vice-President, M. A. Smith, Gallatin; Secretary-Treasurer, Chas. Wood Fassett, St. Joseph.

COUNCILLOR DISTRICTS AND COUNTIES IN EACH DISTRICT.*

F. J. LUTZ, St. Louis, Chairman. E. J. GOODWIN, St. Louis, Secretary.

First District.—Councillor, C. L. Evans, Oregon. Counties: Holt, Atchison, Nodaway.

Second District.—Councillor, W. T. Elam, St. Joseph. Counties: Buchanan, Andrew.

Third District.—Councillor, G. W. Whitely, Albany. Counties: Harrison, Worth, Gentry, DeKalb.

Fourth District.—Councillor, C. R. Buren, Princeton. Counties: Grundy, Sullivan, Mercer, Putnam.

Fifth District.—Councillor, E. E. Parrish, Memphis. Counties: Clark, Scotland, Schuyler.

Sixth District.—Councillor, H. Jurgens, Edina. Counties: Adair, Knox, Lewis.

Seventh District.—Councillor, L. W. Dallas, Hunnewell. Counties: Shelby, Marion, Ralls.

Eighth District.—Councillor, W. B. Dorsett, St. Louis. Counties: Lincoln, St. Charles, St. Louis, Pike.

Ninth District.—Councillor, A. R. McComas, Sturgeon. Counties: Audrain, Boone, Howard, Callaway, Warren, **Montgomery.**

Tenth District.—Councillor C. W. Reagan Macon. Counties: Macon, Randolph, Monroe.

Eleventh District.—Councillor, J. D. Brummall, Salisbury. Counties: Chariton, Carroll, Livingston, Linn.

Twelfth District.—Councillor, E. H. Miller, Liberty. Counties: Platte, Clay, Ray, Clinton, Caldwell, Daviess.

Thirteenth District.—Councillor, F. E. Murphy, Kansas City. County, Jackson.

Fourteenth District.—Councillor, C. T. Ryland, Lexington. Counties: Lafayette, Saline, Cooper.

Fifteenth District.—Councillor, M. P. Overholser, Harrisonville. Counties: Cass, Johnson.

Sixteenth District.—Councillor, J. R. Buchanan, Nevada. Counties: Bates, Vernon, Barton.

Seventeenth District.—Councillor, R. D. Haire, Clinton. Counties: Pettis, Henry, Benton, St. Clair, **Hickory.**

Eighteenth District.—Councillor, Frank DeVilbiss, Eugene. Counties: Miller, Moniteau, Morgan, Camden.

Nineteenth District.—Councillor, G. Ettmueller, Jefferson City. Counties: Cole, Osage, Maries, Gasconade.

Twentieth District.—Councillor, F. J. Lutz, St. Louis. Counties: Franklin, St. Louis City.

Twenty-first District.—Councillor, G. M. Rutledge, Ste. Genevieve. Counties: Jefferson, Ste. Genevieve, Perry.

Twenty-second District.—Councillor, F. R. Newberry, Fredericktown. Counties: Scott, Madison, Cape Girardeau, Mississippi, **Bollinger.**

Twenty-third District.—Councillor, T. C. Allen, Bernie. Counties: Stoddard, Dunklin, Pemiscot, New Madrid.

Twenty-fourth District.—Councillor, T. W. Cotton, Van Buren. Counties: Wayne, Ripley, Butler, Carter.

Twenty-fifth District.—Councillor Frank Harrison, Farmington. Counties: Washington, Reynolds, Iron, St. Francois.

Twenty-sixth District.—Councillor, R. L. Johnson, Rolla. Counties: Crawford, Phelps, Pulaski, Laclede, Dent, **Dallas.**

Twenty-seventh District.—Councillor, H. C. Shuttee, West Plains. Counties: Howell, Shannon, **Ozark, Oregon, Texas, Wright, Douglas.**

Twenty-eighth District.—Councillor, T. A. Coffelt, Springfield. Counties: Greene, Lawrence, Barry, Stone, Christian, Webster, Polk, Taney.

Twenty-ninth District.—Councillor, A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Cedar, **Dade.**

***Counties in black are not organized.**

Societies in Affiliation with the State Medical Association.

County.	President.	Address of President.	Secretary.	Address of Sec'y.
Adair	J. S. Gashwiler	Novinger	E. C. Grim	Kirksville.
Andrew	John Husher	Rosendale	B. E. Miles	Fillmore.
Atchison	E. A. Lewis	Rockport	A. McMichael	Rockport.
Audrain	W. W. McFarlane	Mexico	C. A. Rothwell	Mexico.
Barry	Wm. M. West	Monett	D. L. Mitchell	Cassville.
Barton	A. B. Stone	Lamar	C. F. Brown	Lamar.
Bates	H. A. Rhodes	Foster	E. N. Chastain	Butler.
Benton	E. L. Rhodes	Lincoln	W. S. Jones	Lincoln.
Boone	W. A. Norris	Columbia	A. W. Kampschmidt	Columbia.
Buchanan	H. S. Forgrave	St. Joseph	Chas. W. Fassett	St. Joseph.
Butler	Victor Cadwell	Poplar Bluff	A. R. Rowe	Poplar Bluff.
Caldwell	C. O. Dewey	Breckenridge	Tinsley Brown	Hamilton.
Callaway	H. I. Owen	Fulton	Martin Yates	Fulton.
Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek.
Cape Girardeau	R. F. Wichterich	Cape Girardeau	E. H. G. Wilson	Cape Girardeau.
Carroll	W. C. Baird	Bogard	R. F. Cook	Carrollton.
Carter-Shannon	Wm. Fulton	Winona	J. A. Chilton	Van Buren.
Cass	G. M. Anderson	Pleasant Hill	R. P. Yeagle	Pleasant Hill.
Cedar	Kimball Hill	El Dorado Springs	J. W. Dawson	El Dorado Springs
Chariton	C. H. Temple	Rockford	C. A. Jennings	Salisbury.
Christian	J. C. Young	Ozark	J. A. Roberson	Ozark.
Clark	R. G. Callihan	Luray	Frank B. Hiller	Kahoka.
Clay	C. H. Suddarth	Smithville	F. H. Matthews	Liberty.
Clinton	John Sturgis	Perrin	E. A. Colley	Plattsburg.
Cole	W. A. Clark	Jefferson City	S. V. Bedford	Jefferson City.
Cooper	R. L. Evans	Boonville	J. R. Lionberger	Boonville.
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville.
Daviess	W. L. Brosius	Gallatin	M. A. Smith	Gallatin.
DeKalb	E. T. Stroup	Weatherby	R. A. Evans	Amity.
Dent	A. F. McMurtrey	Salem	W. E. Rudd	Salem.
Dunklin	N. F. Kelley	Kennett	Paul Baldwin	Kennett.
Franklin	J. P. Dunigan	Sullivan	A. C. Brown	Moselle.
Gasconade-Maries-Osage	J. J. Radamacher	Meta	J. D. Seba	Bland.
Gentry	J. U. Barger	Darlington	Benj. Davis, Jr	Albany.
Greene	T. A. Coffelt	Springfield	J. L. Ormsbee	Springfield
Grundy	Samuel Sheldon	Trenton	E. A. Duffy	Trenton.
Harrison	W. H. Wiley	Ridgeway	J. H. Morroway	Ridgeway.
Henry	J. R. Hampton	Clinton	F. M. Douglass	Clinton.
Holt	F. E. Bullock	Forest City	J. F. Chandler	Forest City.
Howard	J. Y. Hume	Armstrong	C. W. Watts	Fayette.
Howell	J. C. B. Davis	Willow Springs	A. H. Thornburgh	West Plains.
Iron	Ira A. Marshall	Ironton	G. W. Farrar	Ironton.
Jackson	C. B. Hardin	Kansas City	E. L. Stewart	Kansas City.
Jasper	J. W. Clark	Carterville	R. M. James	Joplin.
Jefferson	G. W. Tidwell	DeSoto	R. E. Donnell	DeSoto.
Johnson	W. G. Thompson	Holden	E. H. Gilbert	Warrensburg.
Knox	J. R. Northcutt	Knox City	A. R. Wilsey	Hurdland.
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Lafayette	Lewis Carthrae	Corder	C. T. Ryland	Lexington.
Lawrence-Stone	D. M. Huffman	Crane	C. W. Shelton	Mt. Vernon.
Lewis	J. C. Brown	Lewistown	Paul F. Cole	Steffenville.
Lincoln	S. R. McKay	Troy	Wm. P. Smith	Troy.
Linn	J. T. Polson	Laclede	Foster W. Burke	Laclede.
Livingston	H. M. Grace	Chillicothe	J. C. Shelton	Chillicothe.
McDonald	E. F. Doty	Anderson	M. L. Sellers	Anderson.
Macon	W. H. Miller	Macon	F. B. Dailey	Keota.
Madison	S. C. Slaughter	Fredericktown	J. K. Smith	Fredericktown.
Marion	F. W. Bush	Hannibal	H. L. Banks	Hannibal.
Mercer	H. P. Chesmore	Princeton	C. R. Buren	Princeton.
Miller	J. L. Gilleland	Olean	W. L. Allee	Eldon.
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Monroe	C. H. Dixon	Holliday	W. T. Bell	Stoutsville.
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Newton	R. L. Wills	Neosho	Horace Bowers	Neosho.
Nodaway	L. E. Dean	Maryville	C. E. Fronk	Maryville.
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Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville.
Pettis	C. Bohling	Sedalia	Frank R. Morley	Sedalia.
Phelps	W. S. Smith	Rolla	S. L. Baysinger	Rolla.
Pike	R. L. Pollard	Eolia	R. G. Hereford	Louisiana.
Platte	W. D. Swaney	Linkville	F. M. Shafer	Edgerton.
Polk	J. E. Loafman	Bolivar	J. F. Roberts	Bolivar.
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Putnam	C. H. Carryer	Unionville	J. A. Townsend	Unionville.
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Stoddard	Edward Moore	Bloomfield	John Ashley	Bloomfield.
Sullivan	J. C. Kessinger	Milan	J. S. Montgomery	Milan.
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Wayne	J. P. Sebastain	Patterson	R. J. Owens	Mill Spring.
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ORIGINAL ARTICLES

FILARIASIS NOCTURNA.*

Report of Case.

BY JOSEPH GRINDON, M. D., OF ST. LOUIS.

I presume I may take it for granted, that most of you are acquainted with the condition which forms the subject of this paper by your reading alone, and not through a study of its phenomena at first hand. You will therefore, I hope, not take it amiss, if before reporting the case observed by me, I refresh your memories by a brief recital of some of the leading facts known about this disease.

Filariasis is rare in this country. Cases have however been observed in Key West, New Orleans, Mobile, Charleston, Northern Virginia, and even one case (Dunn) in a woman who had always lived in Pennsylvania. In many parts of the tropics it is among the commonest of diseases. Thus in Porto Rico more then ten per cent. of the inhabitants harbor the filaria, while in Samoa it is estimated that almost the entire population is affected. It is frequently encountered in other islands of the Pacific, in China, India and Africa, in the Philippines, in Central America and the West Indies.

Our information as to the organisms which occasion it, and the relations existing between them and the phenomena of the disease, is far from complete, so that some of the statements current on the subject, although fairly justified, are based rather on analogy and inductive reasoning than on actual observation. Enough however is positively known to permit of a fairly complete presentation of the subject. This information has been gradually pieced together from fragmentary observations, the relations between which were not always at first apparent, and from that fact has arisen a multiplicity of terms applied to the organisms, which, at times, leads to some confusion on the part of the reader.

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

Several species of blood-filariæ have been recognized, each with its geographical habitat, such as Filaria Bancrofti, F. loa, F. Demarquayi, etc.

They are nematode worms, agreeing in their general characteristics and in the main points which concern their life-history. While all species mentioned in our text-books invade the human organism, among the common forms only F. Bancrofti and F. loa are known to be pathogenic. The large adult worms of both sexes inhabit the lymphatic channels and nodes, or connective tissues, while the much smaller embryos make their way into the blood where they exist by the million. To the embryos is applied the term *filaria sanguinis hominis,* to which for the common species are added the designations *diurnia, nocturna* and *perstans,* according as they are to be found in the blood during the day, at night or at all times. These terms, be it remembered, do not designate species, but refer to the embryos alone, as they alone exist in the blood.

The species with which we are now concerned, and the only one ever observed in this country (if we except a single observation of Stiles'), is *F. Bancrofti,* the embryo of which is known as *F. sanguinis hominis nocturna.* The latter is from 260 to 300 μ long (1-100 to 1-90 inch) and 7 to 8 μ across (the diameter of a red blood-corpuscle).

We may begin the interesting life-history of this organism with its presence in the stomach of a mosquito. The embryo gains access to the mosquito with its meal of blood, and is first found in the insect's stomach, in which its enveloping sheath is cast off. This *ecdysis* leaves the worm free to penetrate the tissues of its host. Making its way among the muscles of the thorax, it there remains dormant for two weeks or more,* increasing to five times its original size, and developing an alimentary tube. It then becomes active, wandering about among the tissues of the mosquito, and finally finding its way into the head and proboscis,** often in pairs. On being introduced into the lymphatic spaces of man's skin by the mosquito's sting, it makes its way along the lymphatic channels until arrested by a node,—inguinal, axillary or other. Here it develops to adult life, singly, in pairs, male and female, or in bundles of a half-dozen or more. The adult worm resembles a white thread or horse-hair. The male attains to a length of 3.86 cm. (1½ in.) and the female to from 7 to 9 cm. (3 in.). Some of our best text-books give dimensions equal to twice these, erroneously applying to *F. Bancrofti* the measurements of another and distinct species. Adults have so far been found in 11 cases, distributed in the arm, leg, spermatic cord, ovary, epididymis, in hydrocele fluid, and in a lymph-scrotum. There were in the aggregate 43 females and 8 males. But few of these were found intact and complete.*** The only adult worms so far found in this country, were in the case of Lothrop and Pratt.

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*Jackson, *Tropical Medicine*, p. 400.

**Geo. C. Low, *Brit. Med. J'l*, 1900, Vol. I, p. 1456.

***Lothrop and Pratt, *Am. J'l of Med. Sci.*, 1900, Vol. 120, p. 525.

The worms having mated, the embryos later found in the blood are viviparously produced in enormous numbers. The latter are actively motile, have a rounded head and a sharp posterior extremity. Each is enclosed in a loose, collapsible sheath, longer than itself, the surviving egg-membrane, within which it moves freely in a longitudinal direction, so that the unoccupied portion either projects beyond the head, or extends behind the tail. The presence of this sheath is fortunate, for it hinders the embryo from penetrating the tissues of its human host as it did those of the mosquito, and thus confines it to the interior of the blood-vessels, where it can never develop into the adult form. As Manson estimates that there must be in a marked case as many as 50,000,000 of the embryos in the blood, the condition would be uniformly fatal could any considerable proportion of these develop into adults. As a matter of fact, however, none of them ever does so, unless they be taken into the stomach of a mosquito, and there pass through the necessary extra-human intermediate stage, the essential factor of which apparently is the loss of their enveloping sheath through digestion.

All of the intra-human stages may exist, and in the great majority of cases actually do exist, without occasioning any symptoms whatever on the part of the host. In fact a large proportion of the apparently healthy individuals in any filaria-infested country will show great numbers of active embryos in their blood. Morbid manifestations are traceable only to the presence of parent worms in lymph-nodes or elsewhere, but even these in the majority of cases remain quiescent. In a certain proportion, however, symptoms develop, sometimes of a grave character. They may be constitutional or local.

Constitutional Symptoms: These are usually sudden in onset, and are often the first to appear; there are general debility and fatigue on exertion, with irregular periodical febrile attacks resembling those of malaria; pain in the back, pelvis and groins, sometimes acute and accompanied by nausea and vomiting. Sometimes mild febrile attacks constitute the only sign.

Local Symptoms: These may be such as can be accounted for on mechanical grounds alone, such as obstruction of lymph-channels with resulting dilatation of lymph-vessels, lymph-oedema and lymphorrhagia. Lymph-scrotum may thus be brought about, or when a lymph-vessel ruptures into the kidney or bladder, chylous urine. Chylocele may result from a break into the tunica vaginalis. As rare symptoms are seen chylous diarrhoea and chylous ascites.

At other times again there supervene graver symptoms of an actively inflammatory nature, such as lymphangitis, often distributed along an extremity, with the usual adenopathy, frequently resulting in abscess, and accompanying fever of septic origin,—the so-called "elephantoid" fever. Deep abdominal pain, with fever, suggests the formation of an intra-abdominal abscess. The inconstancy of these occurrences postulates the existence of a contributory cause which is found in infection with one of the ordinary pus-germs.

Although not perhaps a matter of demonstration, it seems, to say the least, highly probable that tropical elephantiasis is a result of these conditions. This is characterized by immense thickenings of the connective tissues of the legs, scrotum or vulva. Scrotal tumors have been removed weighing as much as 200 pounds and vulvar masses weighing 25 pounds.

Manson* places the sequence of events as follows: "Parent female filaria in the lymphatic stream of the affected part; injury of the filaria; premature expulsion of ova in consequence of injury; embolism of lymphatic glands by ova; stasis of lymph; lymphangitis from subsequent traumatism or other cause (septic infection) in the congested area; imperfect absorption of the products of inflammation; recurring attacks of inflammation leading to gradual intermittently progressive inflammatory hypertrophy of the part."

That other causes besides the premature expulsion of ova may lead to blocking of a lymph channel, was shown** by the finding of a dead adult worm in a lymph-channel, the caliber of which was originally many times larger than the worm, but the latter had by its presence excited the proliferation of new connective tissue from the walls, completely blocking the lumen.

Manson*** asks the interesting questions: 1. How is it that the embryos of this species disappear in the day to reappear at night? and 2. Where do they go? They begin to appear about 5 p. m., are numerous by 8 o'clock, reach their maximum about 12 p. m. or 1 a. m., then begin to lessen and have disappeared by 7 a. m. As they can hardly be supposed to die off, disintegrate, and be reproduced in such enormous numbers every 24 hours, they must retreat from the peripheral into the deeper circulation. The case of a patient who committed suicide at 8:30 a. m., and in whom seventeen parents were found, seemed to answer this question, as the embryos were here found in prodigious abundance in the large thoracic vessels, and especially in the lungs. Some have sought to explain the presence of the embryos in the peripheral circulation at night only, by saying that the capillaries being dilated during sleep permit their easier passage. But Manson pertinently asks why the reverse should be true of the F. diurna. He believes that the phenomenon is an adaptation to the nocturnal habits of the mosquitoes concerned.

No medicinal treatment so far known is of any value. Laveran advised quinine internally and Austin Flint, Jr., methylene-blue. Lothrop and Pratt found that when a drop of hydrocele fluid containing active embryos was mixed with an equal volume of a 1-1000 methylene-blue solution, the organisms remained motile after two hours. When quinine was used in the same proportion and in the same manner, most of the embryos became motionless within a few seconds, and none

*Tropical Medicine, p. 572.
**Lothrop and Pratt, loc. cit.
***Brit. Med. J'l, 1899, Vol. II, p. 644.

showed any evidence of life after three minutes. Quinine, however, when administered to patients suffering from this disease, does not kill either parents or embryos, as it is impossible to introduce the drug into the blood in sufficient concentration. Aside from the palliative effects of rest, the only efficient treatment consists in excision of involved lymphatics and contained worms, when these can be located and are accessible. Attendant difficulties and dangers in the way of permanent obliteration of lymph channels need not be insisted upon. Even when parent worms are successfully removed, the disease is not cured, for in no recorded instance has disappearance of the embryos from the circulation been thus secured, showing that other adults must remain. Nevertheless the results of excision have been satisfactory in the removal of symptoms.

The growth of knowledge regarding this parasite may be summed up as follows:

The embryos of F. Bancrofti were discovered in hydrocele fluid by Demarquay, in Paris, in 1863.

They were seen in chylous urine by Wucherer in 1866.

They were first found in the blood by Lewis in India, in 1870. He proposed the name "Filaria sanguinis hominis."

The adult F. Bancrofti was first found by Bancroft of Australia, in 1876.

In 1878, Patrick Manson discovered that the mosquito was the intermediate host. He at first believed that the infected mosquito depositing her eggs in stagnant water, and dying there, thus liberated the embryos, and that man subsequently became infected by drinking this water. This explanation is still current in some of our textbooks.

Geo. C. Low, however, showed, in 1900, that the filaria is introduced into man by the sting of the mosquito.

Case: Mrs. R., aged 51, of good weight and well nourished, was born on the French island of Guadeloupe in the West Indies, and lived there until her coming to this country last year. Guadeloupe is one of the Windward Antilles, lying in Lat. 16 N. and Long. 62 W., 75 miles north of Martinique, where occurred the eruption of Mont Pelée and destruction of Saint Pierre. The climate is tropical, and several tropical diseases are there endemic. The patient made a continuous voyage from Guadeloupe to St. Louis, arriving in that city on Sept. 22, 1907.

Last December she developed an acute bronchitis, influenzal in type, attended with fairly high temperatures continuing for a fortnight or more, and resulting in emaciation and enfeeblement. In January, and while still confined to the house, there appeared a double acute follicular tonsillitis, which still further debilitated her.

On February 15th a patch of reticular lymphangitis appeared on the anterior aspect of the left thigh, attended by swelling of a group of inguinal glands on the same side, with pain and fever. A phenol

pack was applied, but the condition continued to grow worse, new patches of cellulitis gradually extending down to the knee, while the infiltration became denser and deeper. The pain was severe and the fever ranged between 101 and 102. Later there appeared several small patches on the calf of the leg.

About Feb. 23d, lymphangitis set in on the left arm and rapidly spread downward toward the elbow and upward above the axilla, extending to the trunk until about one-third of the back was involved, making the recumbent posture almost unbearable. The temperature rose to 103 and 104. Lymphatic nodes were swollen and tender. There were nausea, vomiting, and general debility and depression.

Inquiry elicited the fact that the patient had had a number of attacks of lymphangitis, distributed over a period of some twenty-five years, although none that at all approached the present in severity. Former attacks had never lasted longer than a week or so, were attended with but mild fever, and had always gone on to resolution without abscess-formation. It was also learned that a number of persons in her former home had suffered from similar attacks, and that cases of elephantiasis were not unknown.

Putting these facts together, a diagnosis of filariasis seemed all but certain. A blood-smear taken on Feb. 25th in the middle of the day showed an abundant leucocytosis, but nothing further. Dr. E. F. Tiedemann, Professor of Pathology in the Medical Department of Washington University, having kindly proffered his assistance, we repaired to the patient's home at midnight of Feb. 27th. Several thick smears were taken from the lobe of the ear, and at once examined, fresh and unstained, the cover-glass being vaselined about its edge to prevent evaporation. Soon an embryo filaria was discovered, vigorously thrashing the blood-cells about in a miniature tempest.

In form, measurements and other characteristics it conformed exactly to the classical descriptions of F. sanguinis hominis nocturna. Once a red corpuscle happened to lodge exactly across its back, which it fit to a nicety, thus furnishing a natural and reliable foot-rule. After forty-eight hours on the cold slide the organism was still slowly coiling and uncoiling itself. How much longer it so continued I do not know. Henry reports keeping one alive for ten days on a slide in a cool room. Other embryos were secured for staining and mounting.

The disease continued to run an acute course, and soon the right arm became involved. On the inner aspect of the left arm there appeared a series of three egg-sized swellings, flaccid to the touch, and unlike abscesses. They were probably lymph-varices at first, but on March 5th, one of them broke and discharged pus. Meanwhile, and for a period of nearly two weeks more, the fever continued ranging about 103 to 104. By the middle of March abscesses had formed and were discharging on the right upper arm and left groin, the fever meanwhile gradually abating and the lymphangitis disappearing.

At present (May 15th) there is edema of the lower extremities, so that standing and walking are difficult and painful. The prognosis is decidedly unfavorable, since it is very probable that important lymph channels have been obliterated, and that living parent worms remain to wreak further mischief. How long they can remain alive, in other words, how long can the disease persist in the absence of fresh inoculations, is a question. That it may be years, we know, as Lothrop and Pratt's case had been in this country four years when the living parents were discovered.*

The daughter of this patient, a robust-looking girl of 22, who came to the United States with her mother, and had until then always lived on the same island, had an acute lymphangitis of the left arm in January. She, too, had had several attacks in Guadeloupe. A blood examination has not been made in her case, but the symptoms taken with the history seem to justify a diagnosis of filariasis.

3894 Washington Boulevard.

*Note added August 7th, 1908. The patient has now been apparently quite well for a month.

Plate With False Teeth in Sigmoid.—Dr. Samuel T. Earle, Jr., of Baltimore, Md. Mrs. F. H. D., the latter part of August, 1907, while eating ham, swallowed a plate with two false teeth. Ten days later she had a violent attack of pain in the abdomen, followed by a chill and fever; there was no recurrence of this for one and a half months. Since then they have recurred from time to time, but not as severe, nor have they been attended with chill and fever. A skiagraph taken of the lower abdominal and pelvic regions showed the plate in the sigmoid flexure of the colon, on a level with the promontory of the sacrum. Examination through the sigmoidoscope brought them into view at the point shown by the x ray. There was considerable tenesmus, and the passage of a good deal of mucus, also a tendency to constipation. Under the influence of two hypodermics of morphine gr. ¼, hyoscin hydrobromate gr. 1-100, and cactina which produced satisfactory anæsthesia, Dr. Earle was able to grasp the plate, through the sigmoidoscope, with a pair of long alligator forceps, and withdrew it immediately behind the sigmoidoscope. (Transactions Am. Proctologic Society.)

ANGINA PECTORIS.*

BY FRANKLIN E. MURPHY, M. D., OF KANSAS CITY, MO.

In establishing the diagnosis of angina pectoris, the two important problems presenting are, first, whether or not the attack is truly angina pectoris, secondly, to determine, if possible, the cause.

When an elderly individual is suddenly seized with agonizing substernal pain in the heart region, a sense of constriction, the feeling of impending death, the pain radiating, particularly into the left side of the neck, into the left arm, facial pallor, no shortness of breath, sensorium unimpaired, the forehead bedewed with cold sweat, and when the attack after a short period, with the recession of the symptoms, disappears, or when in such an attack the patient dies, the diagnosis of angina pectoris from disease of the coronary arteries is clear.

The typical case is readily diagnosticated. The attack may be so mild in degree or so obscured with accessory symptoms that much difficulty attends the diagnosis.

To this symptom complex Heberden, one hundred and fifty years ago, gave the name angina pectoris. Ten years later Jenner called attention to associated changes in the coronary arteries and suggested that the affection is due to these changes.

The malady is one of adult life. In women the condition is comparatively infrequent. Huchard (quoted from Osler) in 237 cases found 42 in women. Brain workers, those of large business interest who lead the strenuous business life, who exercise their muscles little, and who so often practice excesses in times of relaxation from business, are the men in whom we so frequently find heart disease and in these we observe angina pectoris with far more frequence than among day laborers. This suggests the importance, as a predisposing factor at least, of lowered nerve resistance.

John Hunter, who, Osler tells us, stated that "his life was in the hands of any rascal who chose to annoy and tease him," Matthew Arnold, Charles Sumner, and Dr. William Pepper, were victims of this disease.

The intensity of the attack varies. In some instances the suffering from the stabbing, boring, griping pain in the heart region is frightful to witness, the patient believing each moment to be his last. The intensity of the pain is no index to the gravity of the condition, for in the gravest form of coronary angina, pain may be all but absent. The pain may be referred to different parts of the chest, the left side of the neck and to the left arm. The pain most frequently radiates into the left brachial plexus, the pain referred to the left shoulder, the inner surface of the left arm and along the course of the ulnar

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

and of the internal cutaneous nerves, leaving at times numbness of the third and fourth fingers. Occasionally the pain radiates into the right arm, into the jaw and teeth, the testicle, the anus. Through the medium of the vagus and abdominal sympathetic, symptoms referred to the larynx and œsophagus are observed, the pain of ulcer of the stomach and other affections of the stomach, of cholelithiasis and of abdominal aneurysm may be simulated.

The behavior of the pulse in the attack is variable. Often rapid and tumultuous, 150 to 200 per minute, in other cases reduced in rate, as seen by Neusser, to 28 per minute.

The character of the pulse also differs, sometimes small, soft, compressible; often small, of high tension, regular or irregular. Important is the fact that even in severe attacks of angina pectoris the action of the heart and the pulse may be normal. Not unimportant is the phenomenon that in the individual with heart disease, the persistent arythmia of the interval usually disappears during the attack. Heart murmurs present in the interval, during the attack may not be heard.[1]

Disturbance of respiration does not characterize angina pectoris. Dyspnea is not present. The patient from pain often holds the breath, endeavoring to immobilize the chest, to prevent every movement. Bronchial asthma and the asthmatic paroxysms of heart disease are thus differentiated. Pulmonary manifestations, such as cardiac asthma are seen with angina pectoris, but these follow insufficiency of the heart, the angina, as the asthma, resulting from the underlying condition, arteriosclerosis. Of extreme interest are the cases of angina pectoris, which with the appearance of loss of heart compensation, the anginal symptoms disappear, to be replaced by chronic dyspnea with the usual signs of failing compensation. Musser describes such cases. Following the appearance of myocarditis, mitral insufficiency, or aortic insufficiency in consequence of arteriosclerosis, the angina may disappear. Musser states that the prognosis in angina pectoris is better, if at the same time there is present dilatation of the heart.

The most frequent and best recognized cause of angina pectoris is organic affections of the aortic valve and the aorta, with resulting narrowing of the coronary artery. This form of angina is encountered in arteriosclerosis affecting the orifice of the coronary vessels and the vessels in their course, in fatty degeneration of the heart, gout, diabetes, tabes, in cases of lead and tobacco poisoning, and probably syphilis, where, as Neusser[1] states, vascular disease forms the connecting link between the angina pectoris and the primary disease. Angina pectoris in the earlier stages of aneurysm of the aorta belongs in this class.

The majority of cases of severe angina show these changes in the coronaries, which form the basis of the arterial theory of the attacks, held by most clinicians, notably Potain, and Huchard.

According to Neusser[1] in aortic insufficiency of rheumatic origin, in which the aorta remains intact, angina pectoris is of great rarity.

He sees in this a valuable point in the differential diagnosis. He states further that in mitral obstruction and mitral regurgitation, the malady is practically unknown, nor was it present in a number of cases observed by him of combined stenosis of mitral tricuspid and aortic orifices.

Clinically the attack, it is observed, may follow muscular exertion, particularly after meals, exposure to wind, stair climbing, the act of defecation, coitus, emotional excitement, contact with cold, conditions which raise the blood pressure. This suggests that angina pectoris follows ischaemia of the heart muscle. Particularly striking are the cases occurring in comparatively young individuals in whom post mortem, no changes in the aorta or in the course of the coronary artery are found, but at the origin of the right or left coronary artery small atheromatous plaques present, which obstruct the vessel.

The chief morphological changes in the arteriosclerotic process, consist in a combination of degeneration and hyperplasia in varying degrees, principally in the intima. Most investigators agree that in the production and localization of arteriosclerotic changes, mechanical causes play the important role. It appears that increased functional demands upon the vessel wall is a necessary factor in the production of arteriosclerosis resulting in hypertrophy of certain layers of the vessel wall. It is probable that the same influence which induces the hypertrophy of the layers of the vessel wall, longer continued causes the degeneration of these layers. This is the theory of Thoma. Huchard's theory is that alterations in the vaso vasorum are primary, these followed by the changes in the arterial wall. In a few instances it has been shown that arteriosclerosis has its origin in purely mechanical causes and that in all causes leading to sclerosis, mechanical injury to the vessel wall is the most potent. In this connection we may recall the fact that in long continued neuralgia, migraine or neuritis, arteriosclerosis has developed in the affected area. Indeed, Fraenkel of Vienna has induced, experimentally arteriosclerosis from neuritis.

Proper blood supply of the muscle is indispensable for the function of the muscle. Veterinarians years ago in France learned that disease of the blood vessels of the legs of horses limited greatly the ability of the horse to use the legs. Charcot later described the affection in man. Subsequently Erb, who had studied a number of cases, brought the condition into prominence. In individuals through whose diseased blood vessels an insufficient amount of blood reaches the muscle, the function of the muscle becomes progressively impaired. Pain appears and the innervation of the muscle is greatly disturbed. Only at rest when the blood requirements of the muscle are less and the diminished amount passing through the diseased arteries suffices is the equilibrium maintained.

To this condition affecting the legs, Erb has given the name dysbasia angiosclerotica (intermittent claudication, intermittent limp). The study of the condition has markedly advanced our knowledge of angina

pectoris as many of the important features are common to both conditions.

According to Erb,[2] the recognition of the condition is based upon the following symptoms: In walking, paresthesia and pain appear in the feet, a sense of tightness, pain and stiffness in the calves of the legs or above. Coldness, pallor, or cyanosis, sometimes a sense of heat, flushing of the skin of the feet, these symptoms making their appearance after a walk of thirty, twenty, and later after a walk of even five minutes, necessitating frequent stops for rest. A short period of rest brings about the disappearance of all symptoms with free use of the legs. Further walking induces the repetition of the scene. Important in the symptomatology is the failure to find the pulse in all or a part of the arteries of the foot, or at least a marked reduction in the volume, sclerotic changes in the artery, vasomotor disturbances, pallor, redness or cyanosis, and coldness of the feet. In the production of this disorder, according to Erb, syphilis appears to play a rather unimportant role, as does alcohol. Of special interest is the fact that in 14 of 45 cases the only cause which could be elicited was the use of tobacco. In these cases syphilis, alcohol, effects of cold and diabetes as causative elements could be eliminated. Erb concludes that in the production of intermittent claudication, syphilis and alcohol are of less importance, exposure to cold of more importance, tobacco occupying the most prominent place in the etiology of arteriosclerosis of the leg and foot. In this connection it may be mentioned that the trouble is rarely seen in women. Potain and Huchard believe the attack of angina pectoris to be due to like cause. If a sclerosis of the coronary arteries is present, upon exertion, areas become ischemic, this causing the heart pain and the heart anguish. In reference to this Kreh[3] states, "it is probable that functional disturbance of the vessel caliber can lead to similar manifestations. Arteriosclerosis leading to dysbasia angiosclerotica, may not be due alone to the anatomical changes in the vessel wall, but to accompanying arterial cramp, the relation bearing a certain similarity to that in angina pectoris. Here the basis of the attack is arteriosclerosis and probably here also following vessel cramp. The all important question whether or not endarteritis can develop from frequent functional changes in the caliber of the vessel pertains to one affection as the other." Every writer upon intermittent claudication emphasizes the importance of tobacco as an etiological factor.

It has been observed that angina pectoris is very frequent in diabetes mellitus. The attacks differ in no wise from the attacks in cases of arteriosclerosis without diabetes. In the majority of cases, according to Naunyn,[4] the diminution of the sugar in the urine following appropriate dietetic treatment, does not influence the seizure; however, errors in diet influence the condition badly. Intermittent limp is also frequently seen in this affection and is looked upon as a stage in arterial disease preceding diabetic gangrene.

Although angina pectoris is regarded a blood vessel affection, it is closely associated with disturbance of innervation and changes in the heart muscle, in fact, it has been urged that in the beginning it is less a vascular than a nervous affection (angiospasmus). Advanced degeneration of the coronaries has been found in cases in which the symptoms of angina pectoris were very slight, or, in fact, wanting. On the other hand in cases with slight anatomico-pathological changes in the coronaries, the symptoms of angina pectoris have been severe. This fact is offered as an argument that angina pectoris is a heart neurosis, or, heart neuralgia.

Wounds, exposing the heart have, in a few instances, permitted the examination of the heart, the organ found to be insensitive to direct painful stimulation. If pain results from areas of ischemia in the heart, the greatest pain should result from total plugging of the coronary. From experimentally induced embolus of the coronaries, Vogt concludes that the intense pain can come only from the ischemia of the muscle. Many believe the attack is to be traced to the occurrence of sudden bloodlessness of heart muscle to which the arteriosclerosis of the coronaries predisposes. The faulty blood supply of the heart with the accompanying irritation of the ganglia and sensory nerve is suddenly evidenced, if greater demand be made upon the musculature of the heart.

Huchard believes that true angina pectoris is always the angina of exertion (*stenocardie d'effort*), while functional angina is not induced by exertion. Tobacco angina, according to this authority is true angina for the reason that the paroxysms are provoked by over-action of the heart.

All authorities, however, do not concur in the opinion that ischemia resulting from sclerosis alone, is sufficient to explain the pain. "Is it sufficiently clear," asks Bruer, "how in the patient with arteriosclerosis, the effort to meet the increased demand upon the muscle, leads directly to ischemia of the extremity or of the myocardium. Is there not a connecting link wanting? and is it settled that the pain in intermittent limp, and in angina pectoris really and only originates in the relatively anemic areas, (musculature and nerves) that the pain in the various tissues of the extremity or in the myocardium is really the pain of ischemia alone?"

Sclerotic vascular changes appear not to fully explain the condition; but that thereto another factor, functional in character, must be added, a factor related to the vasomotor nervous system. It is believed that through the sclerotic process the nerves of the vessel wall are altered. If, as in all muscular exertion, the tension in the vessel is raised, the vessel nerves react with a reflex cramp through which not only muscle pain, in consequence of the ischaemia of the corresponding muscular area is manifested, but in addition vessel pain. Nothnagel laid particular stress upon the vessel pain and saw in angina pectoris, predominantly *Koronaralgie,* induced by spastic contraction of the

coronary arteries, the radiation of the pain caused by the cramp extending into the neighboring vascular areas. It has been observed in the attack, in some cases, that the pulse in the left radial artery is smaller.

As it appears that sclerotic changes in the artery are insufficient to wholly explain the attack of angina pectoris, that in addition we must include vessel cramp, the question arises whether or not vessel cramp alone, unsupported by the sclerotic condition, can bring about this complex of symptoms. If this is the case it appears to me that we have here the explanation of so-called pseudo-angina,—attacks which may disappear when the toxic agent is no longer operative, or the nervous condition of the patient corrected.

Neusser narrates the case of a policeman who was stabbed in the back near the transverse process of the third dorsal vertebra, with injury to the third dorsal nerve or ganglion. Soon after the injury most intense heart anguish appeared with the feeling that the heart stood still. The pulse, which was full, forceful and regular in the recumbent posture, sank repeatedly to 42 beats per minute; the bodily temperature about 100 F. A careful study of the sensation of the skin of the arm and chest showed that the third left dorsal nerve near its emergence from the spinal canal had been injured. As the dorsal nerves contain branches from the sympathetic which lead to the plexus aorticus, plexus pulmonalis and to the organs of the chest, the conclusion seemed warranted that the above described attacks resulted from the injury, particularly when, after healing of the wound, the man suffered no more attacks, the heart action returning to normal, the man recovering completely.

When we consider the causes precipitating the attack, arteriosclerosis present or not, we see that these causes are of varied character. As has been stated the attack may follow muscular exertion, exposure to wind, contact with cold, may come on after meals, and after mental emotion.

In the patient any one of these causes may bring about a paroxysm. It is seen that the exciting cause finds a point of attack in the peripheral nervous system, skin, muscle, vessels, mucous membrane of respiratory and digestive tract as well as in the central nervous system. When impressions differing so widely in character and made upon such different areas give, reflexly the same effect, that of vessel cramp, we are able to understand this only by assuming that certain nerve centers which control these vascular areas react easily and in a pathologically increased manner to such irritation. This leads, according to Sihle,[5] to the logical conclusion that angina pectoris is a reflex neurosis. A pathological reaction is to be expected when the centers are diseased, when they are hyperesthetic. The assumption of such a central hyperesthesia best explains the occurrence of functional angina, in which there is found neither in the heart nor aorta sclerotic vascular lesions. This hyperesthesia may be caused by syphilis, alcohol, tobacco and fol-

low acute infectious diseases, particularly influenza. Arteriosclerosis alone can cause impairment of the functions of the nerve centers, and enables us to understand why in the presence of irritable centers, emotional excitement, favors the appearance of the attack.

One hundred years ago, Latham called attention to false angina. Pseudo-angina is the term applied to the cases separated by Osler into two groups, the neurotic and the toxic, the former embracing the hysterical and the neurasthenic cases, the latter the cases due to abuse of tea, coffee and tobacco. Women supply the larger number of the cases of the first group.

Hysterical angina pectoris is in many instances readily diagnosticated, in some instances with greatest difficulty. During the attack the patient may appear pale, the face drawn with suffering, the extremities cold, the forehead bedewed with cold sweat. Such an attack suggests true angina. Others complain of heart pain without changes in the facial expression or without pallor. These are to be regarded as cases of functional angina. As is so frequent in hysteria, the cardinal symptoms are accompanied with many accessory symptoms, such as dyspnea, with greatly increased rate of respiration, hiccough, palpitation, aphonia, retching, vomiting, visual disturbance, cough, globus, meteorism, hyperesthesia of precordium, hemiesthesia, finally spells of laughing or crying, eructation, expulsion of flatus and functional bladder disturbance. After the attack pain often persists at particular points.

In this form the substernal pain is often described not as a feeling of tightness and compression, but as a feeling of fullness, a distension of the thorax. The attack may be periodic, appearing spontaneously or after mental perturbation, the exciting causes most varied in character. The attack persists usually two or three hours or longer. A number of attacks may appear in the day, the general conditions of the individual remaining uninfluenced. The simplicity of the symptom-complex in true angina pectoris contrasts strongly with the flood and multiplicity of symptoms seen in hysterical angina. While in true angina the patient in his agony anxiously avoids every word and every motion, in the hysterical form the individual is often noisy and complaining. When hysteria develops in the individual with heart disease or with aortic disease, the diagnosis is difficult and many times more than the probability cannot be diagnosticated. However, careful consideration of the circumstances preceding and following the attack, the appearance of complete anesthesia of the skin of the left arm, contraction of field of vision, the fact that in spite of repeated attacks long continued the general condition of the patient is uninfluenced, and a study of the general make-up of the individual may lead to the proper diagnosis. Huchard's differential table between true and false angina, as given in Osler's practice, will prove of much service.

Tobacco angina appears to be a condition linking true angina pectoris and functional angina. It has been experimentally shown that

nicotin in small doses stimulates the ends of the vagus in the heart. It is believed that the continued use of tobacco induces minute structural changes in the vessel walls, preparing the way for subsequent arteriosclerosis. Neusser,[6] describes a case of myocarditis in an individual who smoked much tobacco. This case he observed carefully and was enabled to study the heart post mortem. He declares this to have been a case of myocarditis from excessive use of tobacco. In describing a second case, carefully studied, he suggests that it is the auricle which is particularly affected in chronic tobacco poison. Erb takes the position that much smoking leads to arteriosclerosis. Klemperer states that nicotin without doubt works damage to the vessels of many men. Individuals with arteriosclerosis in whose history much smoking appears, should positively abstain from the use of tobacco. The intensity of vertigo, intermittency of the pulse, extreme pallor, coldness of extremities, tremor, visual disturbance, headache, the long duration of the attack are symptoms which aid us in the diagnosis of tobacco angina.

Impairment of digestion is common in those who use tobacco. The resulting nutritive disturbance contributes greatly to the arteriosclerosis.

An interesting group of cases of functional angina is considered by Neusser. "A particular variety of the functional form," he states, "are the pseudo-anginas of the neurasthenic as they appear in the anemic and so often in medical students and physicians who auscult themselves. Here we have less an angina pectoris than an anginaphobia, with all sorts of abnormal sensations in the heart region and along the spinal column, a feeling of heaviness in the chest and distension of the heart, dysphagia, pain in the neck and shoulders, cases in which the psychical element plays the prominent part, the thoughts and the occupations capable of provoking the attack."

Paroxysmal precordial pain, indescribable, almost painless precordial oppression, occur in dilatation of the heart, aneurysm, adherent pericardium and in mitral disease. Great difficulty may be encountered in distinguishing between these attacks and true angina pectoris.

Reverting to the subject of pain in the affection we can best understand this from the study of the diagrams by Head and Gibson. The smaller diagram shows the spinal segment as the junction for heart and systemic nerves, stimulation of which is interpreted by the cerebral cortex as pain, etc. Thus it is that although the seat of the trouble is the heart, "through an error of psychical judgment," as Head expresses it, "the pain is referred not to the heart, but to the hand and arm which is so richly supplied with sensation."

Note the nerve connections of the left side of the heart with the spinal segments from which the left brachial plexus springs, and the greater number of connections between the left arm, chest, etc., and left cardiac ganglia, than in corresponding structures on the right side.

Patients subject to this affection should live a quiet life, free from care, and should avoid excitement and muscular exertion. Most im-

portant is the proper consideration of the psychical condition of the patient. He should be encouraged, reassured. To inform him that the arteries of the heart are hardened, calcified, may rob him of his peace of mind for the remainder of his days. Constitutional diseases, syphilis, gout, diabetes, etc., should not be overlooked. Dietetic and hygienic measures should be most carefully observed.

Medicinally, inhalation of nitrite of amyl is employed during the attack, advantage being taken of its vasodilator properties. Osler directs that if in a minute or two relief is not obtained, inhalations of chloroform should at once be given. Less evanescent in effect is nitroglycerin, which may be employed hypodermatically. The vessels of the head and cranial cavity are most influenced by the nitrites. Ortner, for this reason, employes them cautiously in the cases in which the cerebral arteries are highly atheromatous, as the pressure within the cranial cavity from the hyperemia resulting from the use of nitrite of amyl may cause hemorrhage. English physicians were the first to employ erythrol tetranitrate, or tetranitrol. This is supplied only in tablet form. The dose recommended is 0.02 to 0.04. In the period between attacks good results are claimed by Ortner from 0.02 in divided doses, per day. To prevent recurrence of the attacks, diuretin (theobromin sodium salicylate) is recommended most enthusiastically by Breuer and by Ortner. Breuer's plan is to give 3.0 to 4.0 per day, in some instances 5.0. He gives to some patients 2.50 per day for months the dose at regular intervals over the twenty-four hours.

Unfortunately the most frequent cause of angina pectoris is arteriosclerosis, a condition which we at this time are powerless to meet. Schur and Wiesel[8] have shown that a relation exists between muscular work and the activity of the chromaffine system of the suprarenals. The blood of dogs was examined before, after, and while working the treadmill. Adrenalin was found in the blood of the working animal. Adrenalin is elaborated only in the chromaffine cells and raises arterial tension. In chronic nephritis, with increased arterial tension and hypertrophy of the heart, these same investigators[9] found that there is constantly present marked hypertrophy of the chromaffine system. If in chronic nephritis the hypertrophy of the chromaffine system bears any relation to the increased blood pressure, adrenalin should be present in the blood of those suffering nephritis. These investigators have shown that this is truly the case. By chemical test, but particularly by exposing the enucleated frog's eye to the action of the serum from nephritic cases, the presence in the blood of adrenalin, even in dilutions of 1 in 20 was shown. Neusser, in his work on the diseases of the suprarenals, mentions two cases in comparatively young individuals in which the clinical picture led to the diagnosis of Bright's disease. Cancer of the suprarenal was revealed at autopsy. It was concluded the high arterial tension observed in the cases resulted from pathologically increased secretion of the pressure raising principles of the suprarenals.

As vascular changes have been repeatedly observed in those suffering with affections of the suprarenals, it is most probable that a very close relation exists between the chromaffine system and arteriosclerosis. Hypersecretion of the chromaffine cells can cause the increased blood pressure and through cramp of the vaso vasorum bring about the secondary anatomical changes. Looking into the future, Neusser suggests that perhaps the exhibition of the principles of the suprarenal body, to the appropriate animal, antibodies may be developed which for the prophylaxis and treatment of hypertension, will prove availing.

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Bacteria in the Atmosphere.—Dr. Flemming, of the German army, has been studying, by means of balloon voyages, the distribution of microscopic organisms through the atmosphere. He finds that the current assumption of the absence of germs from the upper strata is entirely erroneous, and that bacteria attain, and continue to live at, elevations of more than 13,000 feet. Nor does the number of bacteria diminish in proportion to the increase in elevation, as might be expected. On the contrary, it remains nearly constant for the first 1,600 feet. Within this limit the number is 12.9 per liter (365 per cubic foot) while from 1,600 to above 13,000 feet it averages 0.37 per liter (10.5 per cubic foot). The number of germs is affected by the duration of sunshine, but no effect due to rain or snow could be detected. It is a striking fact that the organisms found in the upper strata are chiefly of species that secrete pigment. This is probably an effect of sunlight, the pigment being secreted as a protection against ultra-violet rays, and is analogous to the darkening of the human skin on high mountains.—*(Scientific American.)*

A REVIEW OF THREE HUNDRED URETER CATHETERIZATIONS IN THEIR RELATION TO DIAGNOSIS AND TREATMENT.*

BY BRANSFORD LEWIS, M. D., AND C. E. BURFORD, M. D., OF SAINT LOUIS, MO.

It was not long after Simon of Heidelberg did his first nephrectomy for fistula of the ureter in 1869, that some of the bolder surgeons who dared follow his example, found that pain is not a reliable symptom, nor an unerring guide in locating disease of one or both kidneys; but that referred pain is entirely misleading in diagnostic interpretation.

Literature records a few of the many fatalities following the removal of the only functionating kidney. Profiting by these mistakes, the careful operator was led to expose both kidneys in all operations before removing either.

The great loss of time, danger of increased manipulation, and inaccuracy of idea gained from the external gross appearance of the kidney as compared to the information obtained from the excretions of its glomeruli and tubules, showed the need of a safer and simpler means of diagnosis.

The urine segregator was the result of the first feeble efforts in the right direction.

Not until Greenfeld (1874) and Powlik (1886), Brenner (1889) (single), first catheterized the ureters in the female by specula, and Boisseau du Rocher in 1889 perfected a cystoscope through which he was able to do synchronous double ureter catheterization in male and female alike, was the collection of uncontaminated specimens of urine from the two ureters made practicable.

The present day perfection of the catheterizing cystoscope, rendering ureter catheterization easy for the operator and comfortable for the patient, without general anesthetic, makes the surgeon who removes a kidney without first employing this indispensable aid to diagnosis, guilty of gross neglect, to say the least. To him who believes this a needless warning, let the answer be given that during the past year a surgeon of prominence acknowledged on the floor of a medical society that he had removed a diseased kidney, only to find at post mortem, an infantile, non-secreting kidney on the other side. Such a mistake could readily have been made in the following case, without repeated cystoscopy and ureter catheterization: The patient sought advice in December, 1906, on account of a slight urethral irritation during urination. History: Male, aged 33 years, married, rather sturdy, and the picture of health. Father died of tuberculosis recently. While a student at Ann Arbor, Michigan, in 1896, he was treated for urinary tuberculosis by Dr. Victor

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Vaughan, by injections of nuclein, and pronounced cured. Five years ago he developed pulmonary tuberculosis and was under the care of the late Dr. Solly of Colorado Springs. He apparently recovered completely, but has since slept out doors, in Saint Louis, summer and winter. The urine was quite cloudy, and pus and tubercle bacilli were found at the first examination. Cystoscopy and catheterization of the right ureter secured urine containing much pus and many tubercle bacilli, as proven by stained specimens and Guinea pig inoculation. Although a splendid view of the whole bladder was secured, no left ureter opening could be found. Four subsequent cystoscopic examinations were made, three by the direct and once using the indirect method, but no left ureter opening could be found. On two occasions injections of indigo-carmine were given and the beautiful blue color was seen to come from the right side, but nothing from the left side, leading to the conclusion that there is an obliterated ureter and kidney on the left side.

Iodoform emulsion was injected through the catheter into the right kidney pelvis on three occasions.

It is interesting to know that the temperature of this patient keeps absolutely normal, 98.4° to 98.8°; that he has been observed now for one and a half years, and is still working hard, enjoying apparent health, passing many tubercle bacilli and spoiling an unfavorable prognosis.

The following mistake in diagnosis was cleared up and patient cured through the aid of ureter catheterization: Case No. ——, male, aged 33. Referred by Dr. F. H. Brown, Billings, Missouri). This case had been diagnosed urinary tuberculosis by a surgeon and a bacteriologist of Saint Louis, in 1899, and treated as such for several years. June 8th, 1907, cystoscopy with double ureter catheterization was done and clear urine secured from the right side, while very light purulent urine was secured from the left side, the pus containing colon bacilli. An x ray by Dr. Carman showed a large irregular shadow in the left kidney region. On incision it proved to be a stone, which is here presented. The patient had never complained of pain in the back, all the irritation being referred to the bladder. He made a complete recovery.

On account of the narrow limits of kidney therapeusis in general, it is probable that differential diagnosis by means of ureter catheterization will always overshadow treatment by the same method.

The treatment of diseases of the kidney pelvis and ureter through the ureter catheter seems so far to be confined to a rather small percent of cases, but these few cases are by no means unimportant.

Perhaps the most noteworthy case where an ideal result was obtained, was that reported by Dr. Bransford Lewis in the *Medical Record,* October 6th, 1906, in which three ureters were found and catheterized in a case of recurrent gonorrhea of five years' standing in a male, aged 24 years, who had been to New York and other cities for treatment, only to have the same recurrence after each course of treatment.

At the first catheterization healthy urine was secured from two ureters and gonococcus-laden pus from the third ureter, which was entirely cleared up after a few catheterizations and lavage of the kidney pelvis, with a gonocide. During the two years since the treatment he has married and remains well.

While not so startling in anomaly of anatomy, still just as important in point of improvement and recovery, are some cases of simple pyelitis, relieved by lavage of the kidney pelvis.

Case No. 256, male, aged 22 years, came from Oklahoma to be treated for pains in the back and cloudy urine, which did not clear up on vesical irrigations. Double ureter catheterization secured urine containing pus and large diplococci from each kidney. After four flushings of the kidney pelvis the right ureter urine was entirely clear of pus and cocci, and the left ureter urine contained only a very few leucocytes and no cocci. The mixed urine from the bladder has cleared up since the last ureter catheterization and lavage, so that the patient has passed urine free from pus for several months.

Case No. 293, female, aged 44 years, mother of five children. General health good until August, 1907, when she had an acute enterocolitis, passing bloody stools for two days. She soon recovered, but continued to have some pain in the back until October 16th, when she was seen, with more severe pain in the back, burning during micturition, temperature 99.5, pulse 96, and very nervous. Urinalysis showed considerable pus, some short, thick bacilli (probably colon bacilli), a few granular casts, some round and transitional epithelium, and a small amount of albumin. Vesical irrigation did not improve the condition, so cystoscopy and double ureter catheterization were done, showing about an equal amount of pus coming from each kidney. The kidney pelves were flushed with argyrol solution. Five days later only a very few pus cells were obtained from the pelves, which were again irrigated. After six days no pus was to be found in the catheterized urine from the bladder. The backache disappeared with the pus, and only a faint trace of albumin could be found in the urine. The patient has remained well to the present time. This case is of special interest, as the infection of the kidney pelves seems directly traceable to the attack of enterocolitis, two months previous.

Case No. 162. Female, aged 36 years. Referred by Dr. Nietert. In 1902, she had severe ureter colic of left side. In bed two weeks. Several colics since that time, once in the right side. Cystoscopy and double ureter catheterization showed clear, normal urine from the right ureter, and very thick purulent urine from the left kidney. The pus contained several kinds of bacteria. Ten times the left ureter was catheterized, and the kidney pelvis irrigated, with marked improvement each time. At the last catheterization, the urine from the left ureter was perfectly clear to the naked eye, and only a few leucocytes were found microscopically. The patient was relieved of all pain and discomfort.

An interesting case was No. 276, boy, aged 12 years. Referred by Dr. Menestrina. He had been crushed between a car and the wall in a machine shop, fracturing the pelvis, injuring the left kidney and rupturing the bladder wall posteriorly and extra peritoneally. Cystoscopy revealed a rent in the bladder, clear right ureter urine, and urine of very light specific gravity, and quite cloudy from the left ureter. Microscopic examination showed this clouding to be an enormous number of lymphocytes with not a polynuclear cell in the specimen. Next day the kidney was incised, but no pus found in its pelvis. A subsequent ureter catheterization showed the left kidney giving down heavier urine, which was almost free from leucocytes.

Obstructions to the ureter catheter may be due to bends or folds in the ureter, strictures or calculi. The following are illustrative cases:

Case No. 224, male, aged 47 years, married. Referred by Dr. Harry Hall, for pains in the back and pyuria, with fever. Cystoscopy was done, right ureter catheterized, securing urine of very light specific gravity, and containing an abundance of round epithelium; but impassable obstruction was met at one-half inch in the left ureter. Flakes of pus could be seen exuding from the ureter. Dilatation of the ureter opening was intended, but the alarming condition of the patient, who was rapidly becoming uremic, stampeded a consultation in favor of a hasty nephrotomy.

About eight to ten ounces of pent-up sanguino-purulent urine was expelled from the kidney, on incision. This organ was found practically destroyed (see specimen) by pyelonephritis, the other kidney participating in the inflammation, as shown by the subsequent post mortem. The patient died in uremic coma about forty-eight hours after the operation. The autopsy showed the left ureter dilated to the size of a small sausage and tightly filled with blood clot. A very definite and narrow stricture was found within the first three-quarters of an inch of the lower end of the ureter. (See specimen.) The specimen demonstrates the fact that the stricture could easily have been dilated and we believe life could have been greatly prolonged had this procedure been carried out before uremia supervened. The right kidney was also inflamed, and right ureter somewhat distended, but there was no definite stricture at its outlet.

Case No. 287, male, aged 20 years, unmarried, mail clerk. Referred by Dr. William Engelbach. He had suffered with pyuria and hematuria more or less constantly for nine years. The x ray had revealed no shadows. Cystoscopy was done and the left ureter catheter met definite obstruction on two occasions at one inch. A flexible metal olive tipped bougie was used and the olive tip forced through the obstruction with a sudden jump. Several times it was withdrawn and repassed, the olive tip definitely engaging in the stricture each time. The stricture was further dilated with a larger bougie, which brought on a very severe ureter colic lasting a few hours. The ureter catheter secured some urine

containing a few pus cells from the ureter. At a subsequent catheterization the catheter passed the stricture readily, draining urine free from pus. The patient was relieved for the most part from pains in the back, but owing to what is probably a tuberculous seminal vesiculitis, he has an intermittent pyuria, accompanied with vesical irritation.

Case No. 261. Male, aged 40 years, married. Referred by Dr. ———. Patient suffered from ureter colic of left side four years ago; moderate pain since then until one and one-half years ago, when it became severe. One attack in January, 1907, caused convulsion lasting ten minutes. He never had pain in the right side until one week previous to the examination. The voided urine was very concentrated and was "full" of uric acid crystals. The case was thought to be one of uric acid crisis. Cystoscopy and double ureter catheterization showed clear urine from the left side and some light obstruction on the right side, which was passed on the second attempt. The right kidney pelvis was thoroughly flushed, and within a few hours the patient passed five uric acid ureter stones ranging in size from the head of a pin to the size of a split pea. One subsequent catheterization was done, after which three similar stones were passed. The vesical ends of the ureters were dilated with the dilating forceps. The patient was completely relieved and has had no further difficulty when last seen several weeks afterwards.

Case No. 374, female, single, aged 30 years. Referred by Dr. N. L. Johnson for cystoscopy. The right ureter gave normal urine, but the left ureter catheter met obstruction at one inch which could not be passed. The x ray showed a small shadow at that point, and Dr. Bartlett removed the stone from the ureter, by the extraperitoneal route, proving to be no larger than a clover seed. It is interesting to note that so small a stone could completely obstruct the passage of the catheter.

The cases of urinary tuberculosis have nearly all been traced to one or both kidneys; one notable exception, however, is thought to be worthy of mention.

Case No. 222; aged 36 years, mother of two children, wife of a physician, brought her husband from another city to be examined for urinary tuberculosis, which was easily demonstrated, and traced to the testicles and seminal vesicles as the primary foci. An examination of the urine of the wife also showed the presence of tubercle bacilli. Cystoscopy revealed healthy mucous membrane of the bladder, except a congestion at the bladder neck and small ulcers at the beginning of the urethra. Both ureters were catheterized but no pus cells nor micoorganisms were found from either side.

Iodoform emulsion was used in the bladder, and prescribed for the patient to use regularly. After two months, and six months respectively, the patient was again examined and a very few tubercle bacilli found in the urine, although the general health was good. Patient not seen since.

No other tuberculous focus could be located in this case and the evidence seems to be rather strong in favor of an ascending infection through the urethra, which seemed to be the chief source of the infection.

The time limit of this paper will not permit an extended recital of findings or results in the three hundred and thirty-three ureter catheterizations we wish to report. The few cases reported in detail have been selected with reference to the various classes of conditions found.

A brief tabulation of some of the findings might be of interest:

The Condition.	*No. of times.*
Pyelitis of one side only (pus)	139
Pyelitis of right side only (pus)	77
Pyelitis of left side only (pus)	62
Pyelitis of both kidneys (pus)	43
No pus in urine from either ureter	54

Organisms Found.	*No. of times.*
Colon bacilli	4
Tubercle bacilli	16
Staphylococci	2
Gonococci	1
Other diplococci	5
Other mixed infections	2

CONCLUSIONS.

1. Cystoscopy with ureter catheterization can safely and easily be done in the office under local anesthesia in 95 per cent of cases where it is indicated, without so much as a urethral chill; the time of manipulation being an important factor.

2. Catheterization of the ureters is clearly indicated and should be carried out in all obscure conditions of the upper urinary tract; such as, hematuria, pyuria not yielding to treatment, ureter colic, and preceding all operations on the kidneys and ureters.

3. In all cases of x ray shadow in the ureter regions, a skiagraph should be taken with ureter catheter made of material that casts a shadow, in the ureter as far as it will pass, making an index pointing directly to the stone, before operation is undertaken.

4. Most cases of pyelitis are amenable to treatment in the early stages, by pelvic lavage; and we have yet to see the case where actual harm was done by such procedure.

5. Flushing of the ureters with mild antiseptic solutions should be carried out as a routine prophylactic procedure, before the ureter catheters are withdrawn.

6. Many cases of ligation or incision of the ureters in removal of large tumors of the abdomen, might be avoided by the preliminary introduction of catheters in the ureters.

KIDNEY STONES; SOME PATHOLOGICAL, CLINICAL AND SURGICAL PHASES.*

BY A. H. CORDIER, M. D., OF KANSAS CITY, MO.

With the advancement made in gall bladder, stomach and appendiceal surgery, we are all well informed, as the journals are constantly teeming with well written articles on these subjects by our best surgeons and pathologists. In fact, gastroduodenal-hepatic-appendiceal surgery has overshadowed many equally important surgical problems among the latter being surgery of the kidneys, especially that phase having to do with the presence of stones in these organs. However, the progress along this line has been equally as great.

The thorough work of Howard Kelly with the ureteral catheters, the wide-spread investigation of Henry Morris, the carefully carried on bacteriologic and pathologic findings of the pathologist, the painstaking chemical pursuits and the improvements in the use of the x rays, have all reduced the understanding of these cases to an almost scientific certainty. The surgeon can approach these cases with a feeling of much security as to the probable findings as well as the ultimate outcome of the case.

The urine holds in solution or suspension inorganic and organic substances in varying proportions: If from any cause these substances are increased beyond the point of saturation or from any change taking place in the character of the urine that makes that fluid refuse to hold in solution or suspension these bodies, a precipitation is the result. This deposit, if only slight in amount, may be within the sphere of a physiologic function but when this deposit of inorganic salts is sufficient to be detected macroscopically the condition known as gravel is produced. Not a very unusual occurrence. This "sand" is usually passed with the urine, producing only slight pelvic, ureteral or bladder irritation; however, in some cases this vesical irritation terminates in an aggravated acute or chronic cystitis. Many of the so-called lumbago attacks are in reality due to pelvic and upper ureteral irritation from this "sand."

It from any cause either from an infection or small amount of blood or mucus, these little gritty bodies become agglutinated, the nucleus for a stone is formed. This stone may pass easily into the bladder or its size or shape may be such that the passage is attended by the most intense pain, or its bulk may prevent its passage at all. Some of these retained in the kidney may grow to an enormous size, one in my work weighing over four ounces.

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

Uric acid, carbonate of lime, phosphate of lime, urate of soda and ammonia, cystine or cystic oxide, enter into all calculi either alone or in varying proportions in individual calculi, the nucleus having one of the above salts with concentric layers of one or more of the other. These secondary deposits are the outcome of bacterial changes produced in the pelvis of kidney. Uric acid and oxalate lime are most frequently met with as uncomplicated calculi as they are deposited from acid (normal) urine.

The largest stones are usually made up of phosphate and ammonium magnesium phosphate the direct outgrowth of an infected pelvis or ureter, this infection being frequently due to the presence of colon bacilli, gonococci, tubercle bacilli or the ordinary saprophitic or pyogenic bacteria. The bacillus coli communis is most frequently found in the early history of stone formation. Yet Morris doubts its etiologic bearing in these cases and believes its presence is merely accidental after the stone is formed or is forming. I am rather disposed to attribute a direct causative factor in stone production to the presence of this germ in many cases. Yet the minor resisting point produced by the presence of the calculus must be taken into consideration as offering a favorable site for these germs to thrive in. The number of stones present varies from a single, many ounce phosphate stone, to many small uric acid or oxalate of lime calculi. In some of my cases there have been many small stones but in most instances there has been but one stone and that usually a large one. All big stones were at one time mere grains of debris. As we improve in our ability to diagnose and have these cases operated on early, we will find more small single stones. In most cases, the stone or stones will be found as shifting foreign bodies in the pelvis of the kidney; occasionally the calculus will be found firmly attached to the dome of a calyx, or sides of the renal pelvis. Some of my cases have resembled in size and shape a small Irish potato with several nodules attached, while others have been flat butterbean or perfectly round in shape. I have in my collection, one large carbonate of lime stone; it is as smooth and white as a piece of polished marble. Others are dark brown and as rough as a pineapple.

The chemical composition of the stone in most of my cases has been either oxalate of lime, phosphate of lime or uric acid, in the order named in point of frequency. Occasionally a small stone is found in the substance of the kidney; in such cases an abscess is found surrounding the stone; in this instance, in all probability, the stone formed originally in a calyx and imbedded itself in the parenchyma as it developed. The parenchyma certainly does not offer a favorable site for primary stone development. I have found good-sized calculi in abscess cavities in the kidney with no communication with the renal pelvis. In a few instances I have found a stone in a perinephritic abscess, there being no pyuria in the case.

Some authors give statistics showing the relative frequency of stone in both kidneys, varying from 58 per cent. (Leguen) to 50 per cent. (Albarran). These cases are in part post mortem findings and Morris justly concludes that after death, findings would naturally be expected to show a larger proportion of bilateral stones. In none of my cases have I found a stone in the opposite kidney, in fact, in not a single case have the symptoms pointed to both kidneys, and the post operative progress of the cases have substantiated this conclusion based on the symptoms. Morris' individual experience being only 10 per cent. bilateral stones, he concludes that a constitutional disease that predisposed to the formation of stone in the kidney would be expected to develop bilateral calculi, but adds that the kidneys eliminate the stone-forming salts in varying proportions. This being true, if both kidneys are healthy, the one eliminating the larger quantity of salts would be most irritated and thus the agglutinating nucleus forming material would be present in greater quantities in that kidney.

These stones may be found at all ages. It is indeed, a very hard matter to strike an average on this point, when one recalls the fact that a stone may lay quiescent in the renal pelvis for years and then give rise to symptoms demanding an operation. We are often asked by patients, if drinking this or that water has anything to do with the formation of stones in the kidney. This is a hard question to answer, as we know in certain localities vesical calculi are more prevalent and we must admit that many bladder stones have their nuclei formed in the renal pelvis. In other words, the condition favorable to stone formation is quite common but few, comparatively speaking, have them. I once had a lady patient who passed, some days, large quantities of "sand" from the kidneys; this kept up for months without producing a symptom or forming a calculus. Had she gotten an infection or any other condition in the pelvis of the kidney that would have increased the agglutinating substances, as blood, pus, disintegrated epithelium or albumin, a stone would in all probability have formed quickly. If a calculus, once formed in the pelvis of the kidney, would produce only pain by its presence, nephrolithiasis would not be of so grave a character. Like many other pathologic processes, the later complications are far more grave than the original disease. A stone in the pelvis may not produce these complications for a long time; however, its presence should be looked upon as would any other foreign body in a cavity lined by a mucous membrane or a serous lining. Sooner or later an infection is inaugurated and a pyelitis, a pyelonephrosis or calculus anuria results: Complications more serious than the original pathology, and all constituting urgent pleas for early diagnosis and timely surgery.

If an infection does not take place the stone may block the ureter and produce a transient or permanent hydronephrosis and atrophy of the kidney of that side, thus seriously crippling the opposite organ. In some instances grave suppurative processes and urinary infiltrations into the

perirenal structures take place. In one of my cases the kidney had become adherent to the diaphragm, the lung likewise to the same structure, the pus from the kidney finding an exit through the bronchus and mouth. The patient passed a half pint of pus and urine from his mouth, daily, for weeks prior to the nephrostomy. The pus and urine ceased escaping from the mouth after the operation. In two or three of my cases the kidney has been converted into a multilocular pyogenic cyst, the whole of the parenchyma being destroyed by the infection and pressure atrophy.

Early in my surgical experience I operated on a case for impacted stones; I found the kidney practically replaced by a mass of dense adventitious tissue with the stone imbedded in the center. The opposite kidney was doing the work of both. In removing this mass, my patient came near bleeding to death as the whole perinephritic territory was a collection of blood vessels. Where there has been produced extensive destruction of the epithelium and retention of this product, cholesterine particles are frequently found floating on the surface of the fluid removed, or even in the urine escaping by the natural channel. In dealing with the symptoms produced by a nephritic calculus one has a large range both in variety, location, intensity and obscurity. With the typical nephritic colic cases we are all familiar but when one realizes that the typical cases are rare, the necessity for a knowledge of the unusual is apparent. In the typical cases of renal colic due to the presence of a calculus, the pain varies in its intensity from a mere uneasiness to the most excruciating suffering, the intensity depending on the size of the stone, its location, shape and surface markings. If the stone is imprisoned in a calyx the symptoms will not be so severe as if it engages in the ureter. A sharp, angulated stone, pressed into the ureter, may produce intense pain in the back and down along the course of the ureter, with the urine accumulating behind it, and from slight ureteral spasm it is disposed to continue its downward course; however it may become lodged and a sacculation of the pelvis or atrophy of the kidney result, or, in some instances, if the stone is close to the kidney, it may become disengaged and drop into the dilated pelvis and the symptoms produced by its attempted passage quickly disappear. The same patient may never have another severe colic spell, yet the calculus continue enlarging until it attains several ounces in weight. The latter symptoms are those of an atypical kidney stone. In all cases presenting obscure symptoms pointing to the kidney, a carefully gotten clinical history should be obtained, also the attack of renal colic from which the patient suffered in the early formative period of the calculus should not be lost sight of.

I have had a number of cases in which the initiatory symptoms dated several years prior to my seeing the case, with long periods of quiescence. The referred pains of a renal calculus are very misleading unless one is very careful in his analysis of the same. Pain in the glans, penis, testicle, bladder or along the courses of the anterior or genitocrural nerve, is of frequent occurrence. Many patients are treated for

lumbago, neuralgia, and cystitis, when the origin of the symptoms is in the pelvis of the kidney. In the suppurative cases constitutional symptoms of a grave character may overshadow the local pathology and lead to an error in diagnosis, such as tuberculosis, typhoid or pyothorax.

In the so-called quiescent cases a history of some disturbance in the region of the kidney is usually obtainable, such as uneasiness in the back, this increased by exercise, riding on rough roads, little attacks of malaise, a change in the quantity and color of the urine as noticed by the patient, and the presence of a few pus and blood corpuscles in the urine. In all such cases the urine should be examined carefully for blood and pus. A careful analysis of all the obscure symptoms should be made as the wrong kidney has repeatedly been opened on the evidence of a referred pain. The pain is always more severe and persistent on the affected side and the tenderness more marked over the diseased side. Of course we must always think of the possibility of there being bilateral stones.

Intestinal and stomach disturbances are of rather frequent occurrence but not more so than in many other abdominal diseases where there is a chronic sympathetic irritation. A long-retained stone in the pelvis of the kidney is almost sure to produce a pyelitis of a more or less extent, hence the presence of pus in most of these cases. The pus in a unilateral stone case is usually in acid urine. A long-retained quiescent stone may completely block the ureter and a large pyonephrosis result with absence of pus in urine. A calculus anuria may be the outcome of a unilateral stone. Blood in the urine in microscopic quantities is usually present and is a valuable diagnostic symptom.

In some instances a profuse hemorrhage may occur. This is rare. The bleeding is usually during or soon after an attack of colic, yet a stone too large to engage in the ureter may by changing its position as the result of a jolting, cause a hematuria.

Up to within the last three years, my experience in the use of the x rays to detect the presence of a stone was limited to a few select cases with thin abdominal walls and large compact stones, and the ability of the patient to remain immovable for forty to fifty minutes, but recently I have had the presence of a small stone depicted on the plate in a fairly well nourished patient in forty seconds. Our x ray colleagues are keeping fully abreast of the progress made along other lines. I am fully convinced that with rare exceptions a fair sized kidney stone can be detected by the proper use of these mysterious rays. However, I place more weight on the combined laboratory and clinical evidence than on the x ray alone.

Time, limit and space in this paper precludes a detailed description of the technique of x ray and ureteral examination in suspected stone cases. A detailed description of the surgical procedures resorted to in these cases would take up much more space and time than at my disposal; however I desire to state that these cases are purely surgical, with rare

exceptions, and should be so classified. The operative procedure is one of the safest in surgery and if done early the restoration of the normal function of the kidney is to be expected in nearly all cases. Late operations are as a rule, successful, in so far as concerns the patient's life, but many of the late cases are left with badly crippled kidneys and partial invalidism.

DISCUSSION.

Dr. Ernest G. Mark, Kansas City: These papers are both of such excellent quality that it is almost impossible to add anything in the discussion of either one. The paper by Dr. Cordier was extremely concise, and took in practically all that can be said in such a short time on the subject. I regret that he did not lay any stress on the examination of the urine. In regard to the catheterization of the ureters, it is interesting to note the progress made in the segregation of the urine. It is a procedure of great importance and should be utilized in all these cases. Whether you use the air method or water method, direct or indirect method, is of very little importance. It has been my good fortune to use the means of irrigation of the pelves in something like twenty or thirty cases, and in all I have had good results. There is no question of the value of this method of treatment.

Dr. Bransford Lewis, St. Louis: According to the usual study of disease we study symptoms, pathology, diagnosis and treatment. According to my estimate of the respective importance of these things, I would study a urinary disease under the symptoms, pathology, diagnosis, diagnosis about nine more times, and then treatment. We often hear the question, "What do you do for so and so?" and I always say, I do not know what on earth to do for a case until I have made a complete personal examination and diagnosis. I introduce here a patient who came under observation some time since. In 1899 his trouble was diagnosed urinary tuberculosis. He lived under that diagnosis with many evils. That diagnosis was an error which, if not cleared up, would have sent him to his grave, because his left kidney was being destroyed by a calculus, from day to day and from month to month. That diagnosis was made by two men very prominent in our community, a surgeon and a pathologist. The actual condition of affairs was that he had stone in the kidney, which was cleared up by ureter catheterization about a year ago and we took out a large stone from his left kidney. I will pass around the stone. The kidney was much enlarged and showed pyonephrosis. We left it in and he has recovered in a very marked way, and has been able to prosecute his work ever since the nephrotomy was done. Very often in these cases the trouble is not referred to the kidney. In this case, Mr. Brown had never had any pain in his kidney. All of his complaint was of the lower urinary tract, especially the bladder. Dr. Cordier speaks of analysis of the symptomatology, but I say that in this case we could not have diagnosed the case by relying upon the symptoms.

Dr. Burford, in closing: Perhaps all of us have heard mention made of the sounding instrument, which is nothing more than a catheter attached to a stethescope. That has been discarded. It is a very ridiculous procedure, as you get so much noise from the bougie passing through the cystoscope that you can tell nothing about the tip striking a stone. We have all heard of the mistakes made in using the x ray in confusing the shadows from lymph nodes, arterio-sclerosis, and other things. These mistakes could all be avoided by using the x ray while the ureters are catheterized with metal stilettes in the catheters. I disagree with Dr. Cordier that manipulation in the ureter and bladder is dangerous. The point is mentioned in the paper that the length of time for manipulation is very important in the matter of reaction. If it is done quickly, as a rule there is no reaction.

Bacillus Carriers.—It is stated upon authority that about 4 per cent. of all typhoid patients become bacillus carriers. In an examination of over 1,700 persons, one authority found 23 typhoid carriers and of this latter number 11 had had no history of typhoid fever. Dr. Geo. L. Soper, of New York, investigated one instance of bacillus carrier which showed that at least seven outbreaks of typhoid fever, with 26 cases and 1 death, occurred in the last seven years as a result of contamination of food by a seemingly healthy cook. As a result of this investigation the cook has been taken into custody by the New York City Department of Health and bacillus typhosus isolated from her stools. Dr. Harrington said this case was the first one reported in this country but that many instances had been discovered in Europe. He cited the well-known case in Strassburg of a woman who kept a bake shop. Every employe who came to work developed typhoid shortly after arrival, and upon examination the woman was found to have carried typhoid organisms for about six years. She prepared the food which her employes ate. Another continuous series of cases, which Doctor Harrington referred to, occurred in a small town in Alsace. Case after case of typhoid fever occurred until the authorities made an investigation and found that they were due to a servant who was a typhoid carrier. He also referred to an insane asylum with 250 patients, where cases of typhoid fever were constantly occurring. One of the inmates, with a history of typhoid, died of some other disease, and at autopsy the typhoid organism was found in pure culture in the gall bladder. (Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service.)

TRAUMATIC RUPTURE OF THE BLADDER.*

BY H. C. DALTON, M. D., OF ST. LOUIS, MO.

Traumatic rupture of the bladder is not of such frequent occurrence that the general practitioner sees several cases. The first accurate description of the lesion in point was presented by von Roonhuysen in 1676, although rupture of the bladder was not unknown to the ancient writers. At the present time about ten cases are reported annually; many of the cases are never reported, hence it is difficult to estimate the frequncy of the accident. Of 8,367 surgical cases treated at the Episcopal Hospital of Philadelphia from January 1, 1900, to January 1, 1905, there were but three suffering from rupture of the bladder. About two cases of the latter affection are met with among the 9,000 surgical cases treated annually at the Cook County Hospital.

The predisposing causes of rupture of the bladder are: (1) Alcoholism; (2) sex; (3) distended bladder; (4) disease of the bladder; (5) urethral stricture; (6) age.

Alcoholism predisposes by increasing the urinary secretion, blunting consciousness, producing abdominal relaxation, and exposing its patient to bladder distention and trauma. It has been found that more than 90 per cent. of the patients are males. The lesion occurs most frequently between the twentieth and fortieth years; Cropper's patient was four years of age, while that of Robinson was five. Alexander has expressed the opinion that rupture never occurs unless the bladder is distended; Bissell's patient had, however, urinated a few minutes before a cake of ice, weighing 350 pounds, fell upon the lower part of his abdomen, producing an intraperitoneal rupture of the bladder. Lange and others have cited similar cases. It is obvious that disease of the bladder predisposes to rupture.

The exciting causes of rupture are: (1) Blows; (2) falls; (3) kicks, etc.

In one of Bissell's cases, the patient fell a short distance alighting upon his left buttock; operation showed an intraperitoneal rupture of the bladder. Bayard Holmes reported a similar case. In Alexander's opinion the bladder lesion is due to the forcing backwards of the distended viscus against the promontory of the sacrum; in some of the cases it is due to *contre-coup*. Extraperitoneal rupture is not infrequently due to a fragment of the fractured pelvis, or to separation of the pelvic joints. In 107 of Bartel's 179 collected cases a fracture of the pelvis was present.

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

When we recall the fact that the weakest point of the bladder is its summit, it is not at all surprising that more than 85 per cent. of the cases of rupture of the bladder are intraperitoneal. The rent is usually on the upper posterior surface of the viscus. In nine of Ashhurst's 110 collected cases it was both intra- and extraperitoneal. When the original force fractures the pelvis, the bladder lesion is usually extraperitoneal. This was true in 75 per cent. of Ashhurst's cases.

The size and direction of the laceration are quite variable. In the extraperitoneal cases the laceration may be five inches in length. The intraperitoneal cases vary from one-half to over four inches.

The clinical manifestations are not always clear. The most constant are, (1) a pressing desire to urinate, but inability to pass anything, save a few drachms or ounces of blood or bloody urine; (2) sudden onset of severe pain in penis and lower abdomen; (3) more or less tenderness and rigidity in hypogastric region; (4) more or less shock depending on the size and location of the rupture; and (5) the subnormal temperature and increased pulse rate. Catheterization does not relieve the pressing desire to urinate. Marnoch and others have reported cases in which catheterization evacuated clear urine. In a few of the cases the patient was able to urinate, and the urine was free from blood. A review of the reported cases shows, however, that in more than 85 per cent. of the bladder lacerations the urine is bloody. The severity of the shock depends on the degree of peritoneal soiling and the presence or absence of complications, *e. g.*, fracture of the pelvis. The position assumed by the patient is often very striking. Lange and others have tabulated cases in which the patient was unable to assume an upright position, but was compelled to assume a crouching-sitting posture. Johannsen has called attention to the peculiar shaped area of dullness found in the suprapubic region in cases of extraperitoneal rupture of the bladder.

The diagnosis is not always easy, although the mere history of recent injury, and the presence of a pressing desire to urinate with inability to pass anything except a few drachms or ounces of bloody urine, combined with pain and tenderness in the lower abdomen, should suffice to guide the medical attendant to the seat of trouble. The fact that a patient who has been on a debauch, awakens with pain in the hypogastrium and inability to pass clear urine, suffices to cause us to more than suspect a traumatic rupture of the bladder. Catheterization should be done in all cases of recent injury; especially so when urinary symptoms are noted.

In a monograph read before this Association, Dr. Babler called attention to the importance of making a digital examination in all obscure abdominal cases. This is especially true in cases of suspected vesical rupture. It will also enable us to determine whether or no the tip of the catheter has passed through the rent in the bladder. We may be able to feel the spicula of bone in cases of extraperitoneal rupture.

Morton has suggested that we use hydrogen gas, Keen advocated the injection of filtered air, and Wier proposed the injection and subsequent withdrawal of sterile water, to ascertain the presence or absence of a rupture of the bladder; but continued experience proves the tests to be both dangerous and useless (unreliable).

The diagnosis of traumatic rupture of the bladder must rest on the history of the accident and the clinical findings. As previously stated, the sudden onset of severe pain in the penis and hypogastrium, the pressing desire to urinate, the inability to urinate satisfactorily, the passage of a small amount of bloody urine, the subnormal temperature, and the finding revealed by rectal palpation, should suffice to lead us to the seat of trouble. In those cases in which the urine is clear, the increasing severity of the pain, the abdominal tenderness, the peculiar posture, the changed temperature and pulse rate, and the picture as a whole, will guide the competent practitioner.

The prognosis depends on the time and character of the treatment. Previous to 1855 the accident was considered hopeless. In 1883 Ullman collected 143 cases treated expectantly with but two recoveries. In 1904 Dambriu and Papin collected 78 cases treated surgically, with 34 deaths. Of Ashhurst's 110 collected cases of intraperitoneal rupture of the bladder treated by operation, the mortality was 42.7 per cent. Morris cites a case of spontaneous recovery. In Ledderhose's remarkable case an intraperitoneal abscess in communication with the bladder was incised on the 17th day and the patient recovered. Quick's patient was operated upon ten days after the accident. Recovery followed.

Death is usually due to sepsis. It may be due to shock or hemorrhage. Since more than 90 per cent. of the fatal cases are due to peritoneal infection (sepsis) it follows that early, proper surgical intervention should reduce the mortality to less than 5 per cent. The future will prove this to be possible.

The treatment of traumatic rupture of the bladder has been placed on a satisfactory basis. In 1716 Wogt mentioned the possibility of suturing bladder wounds. In 1826 Grandchamps succeeded in suturing ruptured bladders of animals, and demonstrated the fact that if the mucous coat was included in the suture, leakage would invariably follow. Walters of Pittsburg, was the first to operate successfully on a case of ruptured bladder; the bladder was not sutured, but drained suprapubically and also by catheter per urethra. In 1876 Willett sutured an intraperitoneal rupture of the bladder, but leakage followed and the patient died. MacCormack of Kentucky, is credited with performing the first successful suture in America.

The danger of surgical intervention lies in delay and in improper technique. Early operation is the watchword. Since more than 85 per cent. of the ruptures are intraperitoneal, it seems justifiable to expose the posterior wall of the bladder in all cases where an intraperitoneal rupture appears to be present; the cave of Retzius should be exposed first, in all

cases where the lesion seems to be extraperitoneal and in cases complicated by a fracture of the pelvis. The muscular and peritoneal coats must be brought into good apposition. Usually, it will be found easier to begin the sutures at the upper end of the laceration, using the upper sutures to draw the lacerated portion into view. The lower end of the laceration especially, must be sutured with great care. Chromic catgut or linen will be found preferable, although it is not so much the material employed as its durability, and the effectual closure of the wound. The danger of employing unprotected gauze drainage is exemplified by the case reported by Foederl, in which intestinal obstruction occurred in the fifth week. If the patient is operated upon within a few hours after the accident, an intraäbdominal drain does not appear necessary. In all cases the drain should be small and protected by rubber. The patient should be catheterized every three or four hours, or a permanent catheter placed in the bladder per urethra.

Perineal drainage will be found efficacious in some of the extraperitoneal cases. It has been employed in quite a few of the intraperitoneal rupture cases. A review of the literature will convince the most skeptical that early surgical intervention is destined to reduce the mortality of traumatic rupture of the bladder to less than 5 per cent.

Case. In February, 1902, I was called in consultation with Dr. S. J. Barker of St. Louis, to see a young man, eighteen years of age, who had been run over by a loaded wagon. I saw the patient an hour after the injury. He was severely shocked at the time of the injury, and when I saw him still showed that he was considerably depressed. His pulse was about 100, and weak. Temperature, 97½ F. Examination of the abdomen showed a very slight, red streak over the lower portion. This was, however, slight, considering the injury, and far less than I expected to find. He complained of a constant desire to urinate and an inability to do so. Catheterization gave a very little bloody urine. The patient stated that he had not urinated for four or five hours prior to the injury.

I operated on the patient as soon as I could make the necessary preparations. A transverse rupture of the bladder was found, about three inches in extent, and about two inches from its summit. The pelvic cavity was flooded with urine. Interrupted Lembert catgut sutures closed the wound of the bladder. The sutures were placed about four to the inch. The urine was carefully mopped out with gauze sponges; but the cavity was not irrigated. A large rubber gauze drainage tube was placed immediately behind the bladder.

The patient did beautifully until the second day when his temperature rose to 100½ F. As his bowels had not moved for two days before the operation, I gave him an active purgative after which the temperature fell to normal and remained so. Recovery was uneventful. The drainage tube was removed on the third day.

1308 N. Grand Ave.

CYSTOCELE.*

BY GORDON A. BEEDLE, M. D., OF KANSAS CITY, MO.

Cystocele, bladder hernia, or anterior vaginal prolapse, is a generally conceded sequence of lesions of perineal structure associated with rectocele and uterine prolapsus or displacement, more commonly found in the female of multiple deliveries rather than the mother of a single child and rarely, if at all, among the women who have never known the pleasure of fetal delivery.

If such be the etiology of cystocele, are we just and satisfied to place the entire blame on the pelvic floor. Unquestionably the continuity of the perineum and adjacent tissue offers a valuable aid in assisting to maintain the pelvic contents; that aid is demonstrated by the results following lacerations through the muscles and fascia sufficient to inaugurate a beginning hernia of the pelvic contents. Unattended, the cervix slips forward and downward, stimulated on its way by apparent weakening of its supports, each straining muscular effort increasing the deviation; in accordance, the muscular and peritoneal supports lose their tonicity and yield to the extra labor thrown upon them; likewise the broad and round ligaments yield in proportion to their power of resistance, and the uterus drags down pulling with it the anterior vaginal wall with the attached bladder. Such a condition coupled with direct laceration, or tearing of the ant. vag. wall from its subjacent attachments during the delivery, is briefly the general conception of a cystocele formation.

While conceding the increased susceptibility due to gradual impairment of both muscular and peritoneal supports, through lessened resistance from the impaired flooring beneath, the question of cystocele occurrence through causes foreign to the obstetrical field is barely worthy of consideration; in other words, influence brought to bear, as trauma, to normally weak or mal-posed pelvic organs resulting independently of perineal laceration: A basis for counter-support, such as the perineum, through the continuity of tissue resistance, is of vital importance while, on the other hand, a study of the anatomical arrangements of the various organs of the body clearly defines nature's chief intention—that of position maintenance through suspension.

All repair work of the pelvic outlet, from the beginning of surgical aid in such cases until the present, has varied to as many ideas as the weakened tissue could give conception. With each succeeding step experience and study have advanced our progress, until to-day the counsel of the majority does not cleave to one set of ideas, or any pet typical

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

operation, as a panacea for all cases, irrespective of the degree of involvement or impairment of the neighboring organs, but strives toward one essential point which, I believe, is the foundation of our success at this work,—that is, normal anatomical reconstruction; in other words, reuniting separately the various layers of tissue which have become separated, in as normal position as anatomical knowledge will permit.

Our present general acceptance of the cause of cystocele, in the vast majority of cases, has been derived chiefly through our anatomical understanding of the arrangement of the contents and their requisite maintenance in position. All stages of danger may result in every childbirth, from the most extreme tears to the partial giving way of the fibers with no apparent superficial lesion. The formation and size of the head, or vaginal canal, with degree of resistance or elasticity of the tissue, all play an important part in determining the extent of injury that will result. In brief, a consideration of the musculature of the pelvic floor at delivery, it is reasonable to conceive that the tension increases as the lower portion of the vaginal canal is reached, thus putting on equal resistance that portion of the levator ani known as the terminal fibers of the internal division of the pubo-rectalis, or levator vaginæ, as this muscle encircles the vagina and extends its fibers in continuity through the sphincter ani, chiefly in its lateral anterior portion, much thinner than the lateral walls of the same muscle, laceration is made more eminent at this point following the superficial tear.

The trigone may give way with the severing of the levator fibers, the continuity of the sphincter with the levator vaginæ be separated, permitting the bowel to prolapse in the form of a rectocele, or the tear may be still more extensive and become complete. The degree of danger done the perineum as a support rests mainly with the amount of damage done the levator ani.

The bladder with its peritoneal and subperitoneal tissue attachment to the uterus and anterior abdominal wall, has also an outer covering of rectovesical fascia, from which also the outer coat of the vagina is derived; this fascia forms the anterior and lateral ligaments of the bladder; the lateral ligaments are folds reflected back on the levator ani one on either side. Weakening of the fascia at delivery, coupled with lost tonicity of the levator, to which it is anchored, lessens its control over bladder dilation, and with general weakening of the connective tissue, makes this a susceptible point for complication following the dragging down of the uterus, which results secondarily to the unattended perineal injury. Naturally, the uterine prolapse is a demonstration of insufficiency of tissue tonicity or strength as a whole. We expect much of the so-called peritoneal ligaments but more of the muscular supports, such as the round, uteropelvic, and uterosacral. All do their share to maintain position in unison with the perineal muscles. Remove the support of the perineum and various degrees of prolapse of the entire pelvic contents follows in proportion to the amount of tear interfering with the function

of the muscular sling formed by the levator and fascia, or the degree of resisting power of the tissue above; the bladder drawn down by the uterus, the anterior vaginal and posterior bladder walls become relaxed, the fascia vestings thinned or impaired, and a pouching inward of the bladder results.

Diagnosis of cystocele presents no special difficulty in the majority of cases. Frequently the first intimation towards the diagnosis is extended to the consulting physician or surgeon by the patient herself, through the information that she finds, on trying to introduce her finger into the vagina, that it comes in contact with some protruding round body. Such a cystocele is easily detected through examination in this manner, while the patient is on her feet. The degree of protrusion can be easily outlined; at the same time the other associated lesions or malpositions, if present, are detected. With the patient in the recumbent position, the cystocele mass disappears to a great extent, and, if the bladder is empty, may be barely apparent. Verification of the same can then be made through the use of a small sound.

Residual urine will be found present in the majority of all the more advanced cases, notwithstanding a recent emptying of the bladder. Pain and straining may accompany each act of micturition; as the condition becomes more marked decomposition of the residual urine occurs and inflammation of the bladder follows as a result of this irritating influence.

The smaller or beginning cystoceles are the type which present more meager opportunity to diagnose and consequently, less opportunity to cure. The patient's inattention to her urinary irregularity, false modesty withholding her from exposing herself to the doctor for examination, inability of the doctor to get a true history of the case or carelessly overlooking the true condition during a hurried examination of the woman's vaginal canal, all tend to promote the development of a beginning cystocele.

It is questionable in my mind if this condition is not frequently overlooked by the profession. In considering the great number of suffering females who require the constant close proximity of the most convenient urinal, are we not justified in speculating on a possible bladder prolapsus being at least a contributing cause?

In considering the relief or cure of cystocele, it is needless to say that all contributing causes to the same be properly dealt with first. Operations for the relief of cystocele have varied in idea and technique, much in the manner of the perineal work, fluctuating in keeping with the different anatomical opinions.

Unquestionably the principle of freeing the bladder, as an adjunct to the previous practice of simple denudation of the vaginal wall, added an important step toward better results.

Hadra, according to Noble, introduced this principle in 1887, with the addition of suturing the anterior vaginal wall to the anterior face of the cervix, such attachment preventing the descent of the bladder. These

principles, I believe, have been to a great extent, the basis upon which the majority of recent deviations have been formulated. It occurs to me that the cardinal objects to be obtained vary to a greater or less extent with the degree of the cystocele, the amount of weakened vaginal wall requiring removal, the degree of uterine prolapsus and position of the uterus, each individual case presenting different aspects requiring deviations in the operation in keeping with the same, the chief points embracing all are raising the bladder to its normal position; correct amount of vaginal wall extirpation; proper attachment of the anterior vaginal wall to the anterior surface of the cervix sufficient to assist the proper maintenance of the uterus in its normal position by pushing the cervix backward and upward, and at the same time supporting the bladder above; and, finally, uniting the vaginal wall in perfect, firm apposition with two or three layers of sutures. The first buried structure apposing the deep structure, the superficial continuous suture reinforcing all, with three or four deeply placed mattress sutures of chromicised gut.

In cases presenting a large cystocele and an advanced degree of uterine displacement, sufficient to make it advisable to correct the uterus through abdominal incision in the form of suspension or shortening of the round ligaments through fascia fixation, it seems reasonable that we could expect additional benefits from the various techniques which deal chiefly with shortening of the bladder's suspension from above; in such cases the operation of drawing the bladder up and attaching it to the anterior abdominal walls, under moderate tension after the methods introduced by Smith of England, about a year ago, presents points of value more as an addition to vaginal operation by holding the bladder up; however, in milder cases of cystocele, where there is no other reason for opening the peritoneum, the value to be derived is not sufficient to subject the patient to the additional danger.

My operation of choice is confined to the vagina, varying only in reference to the extent of excision of the vaginal walls, and in keeping with the associated work which may be demanded for the displacement of the womb; quite frequently after uterine replacement through any standard operation little, if any, reinforcement for the relief of the cystocele will be found necessary. The anterior vagina is put on tension and opened anterio-posteriorly, the incision carried down onto the cervix, or off to either side. The bladder is then freed to a greater or less extent from the vagina and uterus after the method of various operators who have introduced this technique. The enucleation of the vaginal wall, of course, varies with the degree of the case. The vaginal wall is now attached to the anterior cervix after the method of Noble's operation. Two or three chromicized gut sutures are passed through the edge of the incision, a half inch to an inch from its cervical terminus; these sutures dip down in their passage and take a firm dip into the upper cervical tissue, being tied later. A closely applied, continuous suture of plain catgut is next started at the anterior point of incision; this em-

braces the fibrous coat in deep firm bites, but not involving the bladder wall at any point. On reaching the point of vaginal cervical union the suture is tied. The sutures uniting the vagina to the cervix are now tied, the angle below closed and the operation completed with continuous suture of plain gut uniting the mucous and muscular layers; the line of incision may be reinforced by two or three deeply placed chromicized gut ligatures; these prevent possible distension of the tissue from a dilated bladder following the operation, which condition, however, should always be guarded against through frequent catheterization, or retained catheter with patient kept on her side for the first few days.

DISCUSSION.

Dr. Louis Rassieur, St. Louis: About six years ago a patient, about 35 years of age, while intoxicated, fell down stairs. While I was dressing his wounds, he complained of a desire to urinate, but could not do so. I passed a catheter and obtained some urine, but mostly blood. He gave a history of having had a full bladder, and was going down for the purpose of urinating. The diagnosis of rupture of the bladder was easily made. Operation was recommended which the patient refused, and he was treated by the conservative plan, being catheterized at regular intervals. He died of peritonitis three days afterward. The peritoneal cavity showed blood and urine and was inflamed.

Dr. Gordon A. Beedle, of Kansas City: In reference to the degree of support afforded by the round ligament, I agree with the doctor that less support is furnished by this ligament than by the other muscular ligaments; however, the support of the uterus, from its suspension standpoint, is not a question of any individual tissue alone, but rather the united results of the tonicity of all the tissue taken as a whole. The muscular ligaments, peritoneal folds, vascular and perivascular tissue, all supply their share in varying degrees.

PNEUMOPLEURITIS FOLLOWED BY PULMONARY ABSCESS*

BY T. A. BLACKMORE, M. D., WINDSOR, MO.

On March 23rd I was called to see this little patient, who is 11 years old and gives a good personal and family history. I found that up to 12 hours prior to my first visit he had been feeling perfectly well with no history of undue exposure. The first symptom of indisposition was a feeling of malaise, followed in a few hours by a chill of moderate severity. Inspection showed his respirations to be hurried, his face was flushed, eyes bright, and countenance depicting a somewhat anxious expression. His temperature was 103 F. and pulse 110. Palpation discovered a hot, fevered, skin and increased vocal fremitus, more marked over the right side. Percussion revealed impaired resonance over the lower lobe of the right lung, where fremitus was most increased; and auscultation in this area showed crepitant rales and slight increase of vocal resonance. There was pain below and external to the right nipple, and cough that was becoming more and more troublesome. Diagnosis, croupous pneumonia.

On my second visit, which was on the following morning, I found the respirations increased from 30 to 35 per minute, pulse 120, temperature 104 F. and sputum showing a rusty hue. Bronchial breathing was now quite marked and percussion elicited distinct dulness. The cough at this time was becoming distressing and the pain of the right side was considerably augmented. Auscultation over the most painful area now revealed a pleuritic friction sound. The third day of the disease gave very much the same picture as on the previous one, except the cough and pain had grown more severe, notwithstanding that 5 gr. of Dover's powders and 1-16 gr. of heroin hydrochlorid had been repeatedly given. At this juncture I strapped the lower half of the right chest, as the patient was vainly endeavoring by manual effort to restrict the respiratory excursions of that side. This, in conjunction with the remedies before employed, gave fair relief, though on several occasions hypodermic injections of morphia had to be given to secure rest and sleep.

No improvement was manifest till on the ninth day of the disease, when the fever began to fall by lysis, and the eleventh day found it normal. The rusty sputum, which had been copious, began to disappear and the pulmonary engorgement showed evidence of speedy resolution.

Thinking now that everything augured well for my little patient, I enjoined quiet and did not see him again for four days. At this visit it was very apparent that convalescence had been interrupted. A slight fever was present, and he was raising, with painful and persistent effort,

*Read before the Henry County Medical Society, June 24, 1908.

a slight amount of muco-purulent sputum. Examination of the lung showed that normal resolution was not progressing, there being more or less dulness on percussion and muffling of the breath sounds.

Fearing there might be some invasion of the lung by the tubercle bacilli, I promptly examined the sputum but found them absent. As the case progressed from day to day the patient presented all the evidence of accumulation of pus in some portion of the body. The temperature chart now began to show the long sweeps of septic absorption; there were sweats, chills and hectic flushings. A blood count showed a leucocytosis of over 30,000.

My patient was now losing flesh and strength rapidly, notwithstanding vigorous tonic and supportive measures were being employed. Physical signs showed increase of dulness on either side of the right axillary line, extending from the fourth to the eighth ribs. This soon gave place to flatness, with loss of all breath sounds. A change in the position of the patient effected no change of outline in the area of dulness, and a circumscribed empyema was now strongly suspected. On April 21 I aspirated for pus, but repeated punctures failed to discover its presence. The operation of opening and draining the pleural sac, which had been contemplated, was now deferred. The evidence in favor of pulmonary abscess was now very much strengthened and a probable diagnosis of the same was made.

On April 23rd, the second day after my failure to demonstrate the presence of pus by aspiration, a copious, frankly purulent, expectoration, suddenly began, a yellowish, creamy color, containing macroscopical shreds of lung tissue. The free expectoration continued, at intervals of 4 to 8 hours, with little diminution, for six days. During this time there was little abatement of the fever and sweats, the pulse continuing feeble and rapid and vomiting was frequent. The general improvement, so often seen immediately following the rupture into a bronchus of a pulmonary abscess, was wanting.

However, the seventh day following rupture showed some lessening of the purulent sputum, and pulse and temperature soon took on a favorable turn. From this period, recovery went on uninterruptedly and in two months from date of primary pneumonic attack the patient was able to be up and about the room. His weight was very much reduced, but he has improved rapidly in the past month, having gained about 20 pounds.

In this case I think it is reasonable to assume that the abscess cavity was situated very near the costal margin of the lung, as evidenced by the flatness and pain, and the interesting play of physical signs after rupture, alternating from dulness and loss of breath sounds when filled, replaced immediately after emptying, with tympany, Wintrick's sign and amphoric breathing.

The patient early learned that in certain positions he was freer from cough and expectoration than in others, and spent most of the time

lying upon the affected side with head and shoulders elevated. The taking of food seemed to favor the emptying of the abscess cavity, as ingestion was usually followed by cough, expectoration and often emesis.

Pleurisy is a very common complication of pneumonia. Writers differ greatly, however, as to its frequency, some claiming it occurs in as high as 15.8 per cent., while others place it as low as 1.3 per cent. This wide difference of opinion as to its frequency of occurrence is accounted for by the fact that some observers wholly ignore the mild pleuritic involvement, while others are content to classify the same as distinct complications. In all pneumonic processes extending to the surface of the lung, there must be some irritation of the pleura.

The nervous stability of the patient has no doubt some bearing upon the character of the suffering caused by pleurisy. Preble, whose brilliant little monograph sheds so much light upon pneumonia and its complications, cautions us to view with circumspection those cases in which the pain is beyond the ordinary, because of the frequency with which empyema results in these cases.

The mortality of pneumonia with pleurisy is greater than in the uncomplicated variety, the estimates of the various observers placing it at from 20 to 40 per cent.

Fortunately pulmonary abscess is not a common sequela of pneumonia. In 424 autopsies by Kerr there were 8 abscesses in the lungs, that is, in 1.9 per cent. of the cases going to autopsy. Sello, in 750 cases, found 11, which is 1.5 per cent.

Only general statements can be made as to the causes of this rather rare ending of pneumonic processes. Preble tells us it occurs chiefly in the debilitated and in alcoholics. Suppier claims that 80 per cent. of abscesses of the lungs, tuberculosis excluded, are in the lower lobes, and that of 49 cases upon which he operated, 23 were subsequent to croupous pneumonia.

The diagnosis of pulmonary abscess prior to rupture, is often difficult or impossible; for there may be present no other signs than cough, fever, and probably slight expectoration, with impairment of resonance on deep percussion. When the abscess is large and approaches the surface of the lung, the symptoms and physical signs are almost identical with those of empyema. The fluoroscope offers perhaps, the greatest aid in diagnosis.

The abscess may terminate, as did this one, by rupture into a bronchus and expulsion of its contents through the mouth; or death may ensue, as Hare has shown, not only from septic absorption, but from gradual exhaustion due to prolonged suppuration. The ulceration of the walls of a blood vessel with consequent severe hemoptysis may also occur. The pleura and diaphragm may likewise be perforated, if the abscess is in close proximity to these structures. Hare cautions us, however, to always regard the prognosis as grave.

In those cases terminating favorably there is formed around the zone of necrotic tissue, a wall of inflammatory exudate which later undergoes progressive fibrous contraction until the cavity disappears or is greatly reduced in size.

The treatment of abscess of the lungs divides itself into two parts: the support of the patient's strength by good foods, a liberal amount of stimulants and abundance of fresh air; and the opening of the cavity through the chest wall and lung by means of the knife, bone forceps and thermocautery.

The supportive drugs of greatest value are possibly iron, arsenic, malt, port wine and whiskey. An easily digested, semi-liquid diet, with digestants to aid speedy absorption, should be looked to. Heroin, codeine, morphine or other preparations of opium, should be employed to control cough and pain. Inhalants for relief of the associated bronchitis may also be given with benefit.

Some Recent Contributions to the Physiology of the Rectum. —Dr. Samuel T. Earle, Jr., of Baltimore, Md., stated that the properties of the external sphincter resemble those of plain muscle; that the anus closes by permanent tonus of the two sphincters independent of the will, but is supplemented by it for voluntary control, that the tonus practically disappears after section of the nervi erigentes, proving thereby that the closure depends upon the constant expenditure of nervous energy, and not upon the elasticity of the muscle and the arrangement of its fibres.

That there are constrictor and dilator fibres to the internal sphincter which can be stimulated reflexly through the spinal cord, proving a reflex centre in the lower portion of the cord; that through this centre, either reflexly or voluntarily, the internal sphincter can be dilated or constricted and the external sphincter can be inhibited. (Transactions American Proctologic Society.)

HENRY'S RUBBER DRAINAGE SPOOL FOR EMPYEMA OF THE CHEST.

BY OSCAR H. BENKER, M. D., OF ST. LOUIS, MO.

For the past three years I have carefully observed the use of this spool, in twenty cases of empyema of the chest, by its originator, Robert Y. Henry M.D., and with his permission I give the following description of the spool, its method of employment, and advantages.

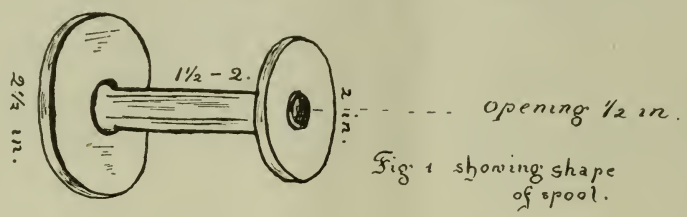

Fig. 1 showing shape of spool.

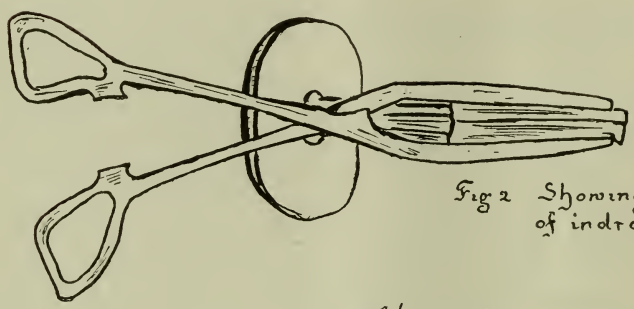

Fig. 2 Showing method of introduction

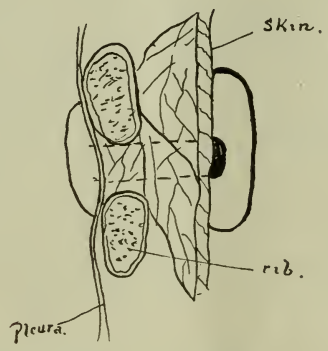

Fig. 3. Showing Spool in situ.

The spool consists of a soft rubber tube, from one and one-half to two inches in length, depending on the thickness of the chest wall, with a one-half of an inch aperture. It is made with soft rubber flanges, one flange two and one-half, and the other two inches in diameter (see fig. 1). However, the spools can be made in any size to suit each individual case.

The dimensions mentioned above are the same as have been used in the cases operated on by Dr. Henry. The smaller flange is intended for insertion into the pleural cavity; the larger remains on the exterior of the chest wall, the two binding the tube in place.

The method of using these spools is as follows: after the usual thoracotomy has been performed, all pus and blood is carefully removed and the field made as clean as possible. A sterilized spool is grasped with the dressing forceps and the smaller flange of the spool is compressed and inserted into the pleural cavity; the forceps are then removed, when the flange will expand and resume its normal shape (see figs. 1, 2 and 3).

The usual gauze dressing is now applied and changed as often as is necessary.

The advantages of this spool, as observed in our cases, are:

First: it keeps the wound clean, as all discharges are carried directly into the gauze, and they are kept from contact with the edge of the wound thus keeping it in a healthy condition, which is not the case where the ordinary drainage tube is used.

Second: with this device the tissues cannot grow into the opening of tube, thus clogging it up and preventing proper drainage.

Third: it does away with the use of safety pins, as there is absolutely no danger of the spool slipping into the pleural cavity; and it will stay in its proper place.

Fourth: the smooth inner flange of the spool adapts itself closely to the inner chest wall, and being elastic, does not injure the lung tissue but allows it to contract and expand naturally.

Fifth: the spool is easily removed, as all you have to do is to apply gentle traction to the outer flange; the inner flange will then double on itself and the entire apparatus can be withdrawn with ease.

Sixth: the device is simple, easily applied, easily removed, and always stays in place.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

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EDITORIAL

THE PREVENTION OF BLINDNESS.

Let us take heart of grace! The leaven of belief in the altruistic conceptions of twentieth century medicine has been stirring the thought of leaders among lay writers ever since the American Medical Association and the various state medical organizations began the crusade of greater publicity on medical subjects, and particularly on preventive medicine and sanitation; and slowly the light of knowledge in these matters has dissipated the ignorance and prejudice which formerly enshrouded every public demand emanating from the medical profession. Examples which prophesy the ultimate realization of those ideals which the practice of medicine in its highest sense stands for to-day, are rapidly multiplying.

The latest evidence of this awakening that has come to our notice is an editorial in the *Century* for September, on the "Prevention of Blindness." The writer, after acknowledging that the prevention of blindness is a matter that "the physicians of the country have been alive to these many years," states that the New York Association for the Blind has just taken steps to minimize by preventive measures the number of persons so afflicted. "This movement," continues the writer, "resulted from the fact that a member of the new association, who has been a leader in far-reaching measures of philanthropy, recently became impressed by the startling fact * * * that from thirty to forty per cent. of those who are blind need never have become so had proper measures been taken at the right time to prevent this affliction."

Missouri has for years (to be specific, since 1895,) had upon her statute books an Act requiring nurses, midwives, and others in charge of new born babes, to report to a legally qualified physician all cases of suspected infection of the eyes occurring in children within three weeks after birth. This Act has remained practically a dead letter, although spasmodic efforts have been made by local medical societies to enforce its provisions; moreover there are many physicians and midwives and nurses now practicing in the state who have never heard of the existence of such a statute.

We venture to suggest that here lies an avenue, paved with the promise of great good to be done, which the St. Louis Medical Society might enter and gain for itself; by so doing, a modicum of that recognition on the part of the people, which is its due as an integral part of the body politic, will be forthcoming if it perform the high functions that appertain to it. The very commendable record of the State Board of Health in other instances, under the present administration, is an earnest that the full coöperation of the health officials will be unhesitatingly accorded such a movement.

Referring to another paragraph in the same editorial in the *Century,* we quote as follows:

> And is it too strained an optimism for us to look forward to a time when the danger of this phase of blindness, as of other preventable diseases, will, by purer and more sanitary living, be largely removed from the ills to which humanity is heir?

To this query we would make answer, that such a vision not only does not strain the optimism of those who are conversant with the labors of the medical profession in this direction, but that already the horizon of higher medicine shows signs of the dawn of freedom from preventable diseases.

COUNTER-PRESCRIBING.

The health department of St. Louis is still active in its campaign against that class of persons who attempt to treat disease without the authority of a license to practice medicine. Acting upon the decisions of the Supreme Court of Missouri that "medicine in its ordinary sense, as applied to human ailments, means something which is administered either internally or externally in the treatment of disease, or the relief of sickness," the health department believes that it can proceed against any unauthorized person whose acts in treating the sick constitute a violation of this interpretation of the law. The decisions give a very

broad and wide meaning to the words "medicine and surgery" and include the "professor" who administers electricity, the "medical clairvoyant," and many others of that ilk, as well as the druggist who indulges in the pernicious practice of "counter prescribing." In the opinion of the Assistant Health Commissioner, Dr. Winn, counter prescribing is a violation of the Medical Practice Act, and therefore he has determined to use all the powers of the health department in his endeavor to stop the practice.

The drug store is the Mecca where flock innumerable persons seeking something to relieve them of divers maladies, from simple acute affections that would soon disappear without treatment, to grave and chronic conditions that menace the life of the individual. Rarely indeed does the counter prescribing druggist fail to respond with a bottle of ready-made stuff, plastered with labels and wrapped with circulars describing in detail a long list of ailments that will disappear after one to six bottles have been taken. The reprehensible practice of the patent medicine maker, the nostrum vender, and even some of the respectable manufacturing pharmacists, of labeling and wrapping their products with detailed information concerning the diseases in the treatment of which the article is indicated, puts the druggist in possession of knowledge that, if he be so inclined, he will use to his own advantage, indifferent alike to the welfare of the person who consults him, the manufacturer of the medicine, or the interests of the medical practitioner who patronizes his store; and, furthermore, the manufacturer thus encourages that other baneful practice of the irresponsible pharmacist—substitution.

It may be accepted as an axiom that the druggist who makes a business of prescribing indiscriminately for the ailments of his customers, will substitute; and *vice versa.* Hence the health of the community, the business interests of the manufacturing pharmacist, and the dignity of the medical profession are all imperiled through the sciolism of unprincipled druggists, whose pernicious pretensions in this respect are prompted largely by the information contained on the labels and wrappings of articles put up, many of them, solely for the purpose of filling physicians' prescriptions.

Granting the verity of these observations, we can not escape the conclusion that manufacturers of the classes indicated are not guiltless parties to the causes that have operated to postpone the period when the practice of medicine shall comport with the high ideals that have been promulgated as its standard, and toward the accomplishment of which the American Medical Association has done and is doing a service that, after four years of labor, is just beginning to be appreciated by the medical world.

Any proper means directed toward breaking up the condemnatory habit of counter prescribing will be welcomed by the medical profession, and by the responsible and conscientious pharmacists of our city who deplore the existence of such conditions in their profession. We shall, therefore, watch the progress of this movement with deep interest. If convictions can be obtained in St. Louis we suggest that the boards of health in other cities in the state proceed in the same manner against offending druggists in their communities. That the practice is all too common none will deny, but hitherto the authorities have felt impotent to cope with the problem owing to the difficulties of securing evidence and obtaining convictions.

BURIAL OF PERSONS DYING FROM SMALLPOX AND OTHER CONTAGIOUS DISEASES.

The municipal assembly of St. Louis has recently passed an ordinance affecting the time and place of burial of bodies of persons dying from smallpox and other contagious diseases.

In the past bodies of patients dying at Quarantine could only be removed after the lapse of ten years, at which time the bodies would be in a candition rendering their removal wellnigh impossible; under the present law the bodies may be removed at once and buried in the cemeteries of the city, provided the bodies are properly prepared and enclosed in a hermetically sealed metallic caskets.

This bill was drafted by the National Smallpox Suppression Committee of St. Louis to do away with one of the antiquated, inhumane and most objectionable provisions of our quarantine law, and to overcome the most serious objection raised by the people to being sent to quarantine. The fact that so many cases of smallpox have not been reported to the authorities, due to this provision in most instances, is, to a considerable extent, responsible for the large number of cases which have occurred here during the past decade.

Now that we have a more modern and better equipped hospital at the station and that the bodies of those who die there may be removed immediately, no one afflicted with a quarantinable disease should object to being sent to quarantine.

Another bill provides for the disinterment of bodies of persons who have died of infectious or contagious disease, after such bodies have remained in their graves for one year or more. Such bodies may be removed from their graves and buried elsewhere, under such rules and regulations as the Health Commissioner and the Board of Health may

formulate. The bill further provides that bodies of persons who die of infectious or contagious disease outside of the city, may be shipped into the city and buried in the cemetries, provided they are prepared and encased to comply with the rules and regulations laid down by the Health Commissioner and Board of Health.

EDITORIAL NOTES

Tuesday, the 4th, was a very cold day in August—for Tubbs.

Dr. W. S. Allee, president of the State Medical Association 1907-1908, has been nominated for state senator from the 27th district.

The following new and non-official remedies have been approved by the Council on Pharmacy and Chemistry:

Beta-Eucaine Lactate (Schering & Glatz).
Capsules Glycerophosphates Comp. (Mulford Co.).
Iodalbin (Parke, Davis & Co.).
Iodalbin Capsules (Parke, Davis & Co.).

The office of the Texas State Journal of Medicine suffered a slight monetary loss and a great deal of inconvenience recently when the building took fire and the Journal office was drenched with water. The library, which is located in the Journal office, suffered considerably from the water and falling debris. A large part of this library had previously been through the Galveston flood.

Jackson county is making a thorough canvass of its district, through the committee on district organization, with the view of bringing into the Society all physicians eligible to membership. An effort is being made to have these gentlemen make application in time to be voted in at the first meeting in October. Those who join at this time and pay their dues will be received into full membership until January, 1910.

The month of August seems to have been accepted generally among the county societies as the time for suspending meetings, and this issue therefore contains only a few reports of county society meetings. This gives us an opportunity to publish the constitution and by-laws of the Missouri Society of Medical Secretaries (the name adopted by the Association of county secretaries), which will be found on another page of this issue.

The municipal assembly of St. Louis has passed an ordinance providing for the immediate removal and burial in the city cemeteries of the bodies of persons dying from smallpox in quarantine, and permitting the disinterment, after one year, of bodies of persons who have died from contagious diseases. Formerly bodies could not be removed from their graves at Quarantine for ten years. The bill was drafted by the National Smallpox Suppression Committee and was introduced by Dr. H. W. Bartscher.

The health department of St. Louis, early in the year, took up the systematic investigation of the sanitary conditions of grocery stores, meat shops, restaurants, bakeries and confectioneries. A special inspection of these places is made several times a year and a record of the report of the inspector is kept on file. This year about 200 stores in these classes have been inspected. Of this number about 50 per cent. was found in good condition, 40 per cent. required special attention as to defects in plumbing, ventilation, etc., and 10 per cent. was ordered to make more extensive alterations and give greater attention to the cleanliness of utensils, furniture, apparatus, etc.

The Wisconsin State Medical Association closed a successful meeting on June 26th. Among the important measures adopted was a plan for defending members against civil malpractice suits. The committee on public policy and legislation asked for financial assistance in prosecuting quacks and illegal practitioners in the state. The House of Delegates voted that a voluntary assessment of $2.00 per capita be ordered and the sum thus realized be placed at the disposal of the committee. A referendum vote was ordered on the proposition to increase the annual dues from $3.00, the present amount, to $4.00, this to include the medical defense privilege.

Tuberculosis in St. Louis for the week ending July 22nd showed a decrease of new cases and fatalities as compared with the corresponding period in 1907. In the latter year 60 new cases were reported and 29 deaths, while this year there were 48 new cases and 18 deaths. This falling off is attributed to the extra precautions taken by the Health Department, whose work has become more effective since the passage of the ordinance requiring physicians to report cases of tuberculosis and also through the coöperation of the antituberculosis society.

The State Board of Health has been ordered by the Circuit Court to examine the graduates of the 1908 class of the Barnes University for license to practice medicine in Missouri. This action is the result of the suit brought by the class to compel the board to examine them, a privilege that had been refused on the ground that the faculty had failed to equip the institution according to the standard adopted by the board.

The order is based upon the decision of the court that the board had not properly examined the equipment. The order applies only to the 1908 class, the court expressing the opinion that if, after further examination, Barnes University does not meet the demands of the schedule of minimum requirements, "the right of the board to exclude future graduating classes will not be subject to successful attack in the courts." The board has filed an appeal which acts as a supersedeas.

The medical profession of California is rejoicing over a recent decision of the Supreme Court, which seems to establish the constitutionality of the new act governing the practice of medicine in that State. We congratulate the members of the California State Medical Association in having a good law governing the practice of medicine, and one so constructed that it can be successfully defended against attacks by that element, all too numerous in every community, which abhors legislative strictures upon pseudo-medical practices. Commenting upon the decision, the editor of the *California State Journal of Medicine* says, "this will be a sad blow to that small but compact circle of 'sore heads' and their diploma mill friends; but that also is a cause for rejoicing."

Indicative of the growing influence of the medical profession in public health matters rises conspicuous the adoption of a public health plank in the platforms of the two great political parties. The Republican platform contains the following paragraph on this subject:

> We commend the efforts designed to secure greater efficiency in national public health agencies and favor such legislation as will effect this purpose.

The plank in the Democratic platform is more explicit; it reads as follows:

> We advocate the organization of all existing national public agencies into a national bureau of public health, with such powers over sanitary conditions connected with factories, mines, tenements, child labor and other such subjects as are properly within the jurisdiction of the federal government and do not interfere with the power of the states controlling public health agencies.

As both political parties have now pledged themselves to support measures under federal control, for the proper safe-guarding of the national public health, we may look forward hopefully to the passage of a bill, at an early session of Congress, establishing a national bureau or department of public health.

At the annual meeting of the New Jersey Medical Society, June 19, 1908, the report of the committee on medical defense was laid over for another year. The committee's report was favorable to the adoption of the medical defense plan, but the majority of the members of the House of Delegates evidently were influenced to vote against its

adoption through the adverse opinions of many who discussed the subject, notwithstanding strong arguments by the secretary and others favorable to the report. We think the New Jersey Association will make no mistake in adopting this plan when the matter comes up for action next year. Their treasury is well filled and funds could be appropriated without weakening any department, although the objections did not hinge upon this point. We consider the medical defense feature of state organizations one of the strongest bars to malicious and injurious acts by unprincipled persons, in or out of the profession. All associations that have adopted the plan report an immediate and decided decrease in the number of malpractice suits against members. The Missouri State Association extended this protection to its members last May, and did so without imposing any additional tax upon the membership, therein advancing a step further than most of the other states that have adopted the plan; for, in nearly all other instances, the annual dues have been increased, or a special tax levied, to meet the added expense.

NEWS NOTES

Dr. H. W. Soper, of St. Louis, was married to Miss Mary R. Holcomb, of Rochester, N. Y., on August 12th.

Dr. Archer O'Reilly and Dr. J. R. Clemens, of St .Louis, journeyed to Boston by the automobile route during the month of August. They were on the road ten days.

The County Secretaries of the Michigan State Medical Association will hold a meeting in September to discuss the advisability of organizing a County Secretaries Association.

The Southern Medical Association will hold its second annual meeting at Atlanta, Ga., on November 10th. The proceedings will be divided into three sections—a section on medicine, a section on surgery and a section on ophthalmology. Dr. Oscar Dowling, of Shreveport, La., is secretary.

The use of denatured alcohol in the manufacture of liquid medicinal preparations, either for external or internal use, is prohibited by law. Physicians will do well to remember this and not prescribe denatured alcohol in any form. There is a penalty attached to the writing of such prescriptions and the druggist who fills them is also liable to prosecution.

All physicians who contemplate attending the meeting of the International Congress on Tuberculosis at Washington, D. C., September 21st to October 12th, are invited to correspond with Dr. Chas. Wood Fassett, St. Joseph, Mo., who has charge of the Missouri excursion party, and full particulars relative to accommodations enroute and in Washington will be furnished them.

The next annual meeting of the Medical Association of the Southwest will be held in Kansas City, October 19-21. The members in Kansas City are preparing an elaborate program for the entertainment of the visiting physicians and their wives, so that all who contemplate attending this meeting are assured in advance that their visit will be made pleasant and profitable. In addition to a banquet at the Coates House, tendered by the physicians of Kansas City, that prince of hosts, Dr. J. D. Griffith, will guide the ladies on an automobile trip over the beautiful boulevards, through the parks and along the famous Cliff Drive. The scientific program includes a number of clinics at the various hospitals and medical colleges. The Coates House has been selected as headquarters.

Washington University, during commencement week (May, 1908), held a series of clinics and lectures designed especially for practitioners. In designing the instruction offered in this course, the needs of the practitioner were kept in view, and so far as possible the work was made of a purely practical character. In all the courses the work was of a nature to appeal to the surgeon and general practitioner who wish to complete their knowledge of the newer subjects that have come out during the year. All physicians, graduates of Washington University and of other medical schools, were invited to take this work. About fifty non-resident physicians availed themselves of the opportunity to extend their knowledge in this manner. Clinics were held in the various hospitals and dispensaries connected with the Washington University. No fees were charged.

Not the least attractive feature of this gathering of graduates were the social features. Dr. Tuholske entertained the visitors at his residence at an informal reception, and the Alumni dinner was held during that week. It is intended that this work shall be made a permanent feature of commencement week of the Medical Department of Washington University.

OBITUARY

L. E. WHITNEY, M. D.

Dr. L. E. Whitney, of Carthage, Mo., died as the result of an accident while driving on a country road in the vicinity of his home. It was at first supposed that he had been assaulted and murdered, but this belief was not substantiated and a verdict of accident was rendered.

Dr. Whitney was born in New York in 1853. He graduated from the Homeopathic Medical College of Missouri in 1878 and began the practice of his profession in Carthage in 1879. He continued active in his work in that city until his death. He was a prominent advocate of all matters that stood for the improvement of the city's welfare and was recognized as a progressive and conscientious physician. At the time of his death he was city physician of Carthage.

WILLIAM K. CRELLIN, M. D.

Dr. William K. Crellin died August 2nd, 1908, at the residence of his daughter, Mrs. J. W. Botts, in Chillicothe, Mo. Dr. Crellin was born in Whitehaven, England, September 19th, 1817, being in his 91st year at the time of his death. He came to this country with his parents when a child and spent his childhood days in Philadelphia. He graduated in medicine in Cleveland, Ohio, and spent 55 years in the active practice of his profession, the last 28 years in Chillicothe, Mo.

Dr. Crellin possessed considerable literary ability and spent much of his time composing verse. For ten years he had been totally blind, but retained his mental faculties to the last. He always stood in the advance columns of the medical profession, and at the time of his death was an honorary member of the Livingston County Medical Society.

G. W. ALEXANDER, M. D.

Dr. G. W. Alexander, of Chula, Mo., died of apoplexy, June 20th, 1908. Dr. Alexander was born in Kentucky in 1856. He graduated from the Louisville Medical College in 1881, and moved at once to Missouri, where he engaged in general practice. He was a member of the County and State Medical Societies and the American Medical Association at time of his death.

CORRESPONDENCE

To the Editor:

In regard to the serum treatment of cancer, which the newspapers announced as a cure, I would respectfully refer you to a copy of a letter which I sent to the editor of the New York *American,* which explains the circumstances in detail; and also to a statement in the *Post-Dispatch* of July 27th, which gives the facts in the matter.

Needless to say, this notoriety has been unpleasant and demonstrates the inefficiency of the news in our daily papers. It would be a favor to me for you to mention the facts in the proper light, as you may see fit, not only to place my position clearly before the profession, but also to demonstrate to them how easy it is to be placed before the public in an improper and disgusting position. I have received letters from all over the United States east of the Mississippi river and also from Texas, and probably will receive more from the western country when the original article is reproduced in the western papers. Many patients express a desire to come here immediately for treatment; all of them seem to come from an intelligent class of people who write letters which are extremely appealing, and show that the public is easily swayed by anything which is read in the newspapers. Reporters for all of the daily papers visit the hospital daily, and they often obtain a smattering of facts about cases, and then write articles which are misleading and form attractive sensational news.

Trusting that this letter and the inclosures will give you a complete idea of the circumstances, I am,

Yours very truly,

(Signed) C. H. Shutt.

(Copy of letter to the New York *American.*)

Editor, New York *American:*

I have received a number of clippings taken from your paper by people who are sufferers from cancer or who have relatives suffering from this dread disease. The original article, which was published in a morning paper in this city, was written by a reporter who was careless with the facts in the matter, and has gained for me much obnoxious notoriety, and caused false hopes to arise in many sufferers from cancer, for which, I am sorry to say, the scientific and honest medical profession does not claim to have a cure at the present day. Many physicians are earnestly spending their entire time searching for a remedial measure for this disease.

Sufferers from cancer, as well as from any other incurable disease, are easily deluded by any phantom which gives the slightest hopes of improvement. I take it that your paper has the high motive of giving the best information obtainable to its readers, and I would respectfully refer you to the enclosed article from the St. Louis *Post-Dispatch* of July 27, 1908, which is authentic and gives the facts in the matter. Many sufferers from cancer have written me, and in justice to them I could not allow their letters to go unanswered, but many, no doubt, have read articles in the papers and are wondering whether or not the serum is of value. The enclosed article is self-explanatory and authentic. I would respectfully suggest that a number of your readers would be interested in knowing the truth about cancer cures at the present day.

I am sorry to say that physicians of reputation and scientific knowledge do not profess to be able to cure any case of cancer after the disease has existed for any length of time. Many physicians are spending much of their time, some of them their entire time, in working towards some measure which will eradicate this, at the present time, incurable disease. In its early stages in certain locations in the body good surgeons are able to do a thorough operation with reasonable chances of a cure.

I hope that this letter will be of value to you in informing your patrons of the true standing of cancer and the many so-called cures which are mentioned.

Very sincerely,

(Signed) C. H. Shutt.

COUNTY SOCIETY NOTES

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The Cape Girardeau County Medical Society held its regular monthly meeting at Jackson, August 7th, six members being present.

Dr. J. W. Frisler was elected a member of the Society, by transfer from Kentucky.

Dr. Hays read a paper on "Treatment of Acute and Chronic Myocarditis." The paper showed a good knowledge of the subject and of the application of the drug, digitalis, so frequently misused in all forms of heart disease. The doctor thoroughly differentiated the use of drug in such cases.

The practice of druggists prescribing at any and all times, for all ailments of humanity, created considerable discussion. This practice is very common in our county.

On motion the Society adjourned to meet at Cape Girardeau, September 4th.—E. H. G. Wilson, M. D., Secretary.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY.

The Gasconade-Maries-Osage County Medical Society met in Meta, Saturday afternoon, August 8th.

Two patients presented themselves as clinics, the first suffering with astigmatism, and the second with presbyopia, the eyes of both were tested by Dr. John D. Seba, and a prescription for proper glasses given.

Dr. J. E. Neeley, of Vancleave, read a paper on typhoid fever. The essayist went deeply into the etiology, pathology, course and complications of the disease, also its prophylaxis and treatment. This paper was ably written and the discussion by the members present occupied the entire afternoon.

The Secretary read the names of members of the Society as follows: Dr. Frederick Auf der Heide, Drake; Dr. R. E. Baker, Vienna; Dr. J. A. L. Buechler, Freeburg; Dr. J. W. Burgess, Belle; Dr. W. F. Byler, Koeltztown; Dr. John Engelbrecht, Stonyhill; Dr. J. J. Ferrell, Owensville; Dr. W. R. Ferrell, Bland; Dr. C. T. Leach, Fuersville; Dr. J. W. Nieweg, Owensville; Dr. J. E. Neeley, Vancleave; Dr. J. J. Radmacher, Meta; Dr. John D. Seba, Bland; Dr. W. E. Seba, Leedey, Oklahoma; Dr. M. W. Spurgeon, Redbird; Dr. S. J. Terrell, Meta.

Upon motion it was ordered that our next meeting be held Thursday afternoon, September 17th, 1908, in Drake, Gasconade county.—John D. Seba, M. D., Secretary and Treasurer.

RALLS COUNTY MEDICAL SOCIETY.

The Ralls County Medical Society met at Spalding Springs, July 9th. The following officers were elected for the ensuing year: President, C. H. Graves, Carter; vice-president, W. L. Birney, Oakwood; secretary-treasurer, reporter and delegate for two years, T. J. Downing, New London.

Papers were read by Drs. L. W. Dallas, C. L. Pryor, W. S. Smith, Fred Watts, C. R. Dudley, W. G. Hendrix, W. T. Waters and Col. Joe Burnett, all on tuberculosis. The discussion following the reading of the papers was general and the meeting was a pronounced success. About twenty doctors were present.—T. J. Downing, M. D., Reporter.

CONSTITUTION AND BY-LAWS FOR THE MISSOURI SOCIETY OF MEDICAL SECRETARIES.

CONSTITUTION.

Article I. Name—This Society shall be known as the Missouri Society of Medical Secretaries.

Art. II. Objects—The objects of this Society are to cultivate a closer relationship between the component County Societies; to establish improved and more uniform methods of conducting the meetings; to devise and develop the best means of creating and holding interest in the work, and for increasing membership; and by coöperating with the officers of the State Society, to promote the general welfare of the organized profession of the State.

Art. III. Membership—Members shall be limited to the Secretaries and Councilors of County, State and District Medical Societies.

Art. IV. Annual Meeting—The annual meeting shall be held each year on the first day of the annual meeting of the Missouri State Medical Association, the hour and place to be designated by the Secretary of the Society of the County in which the meeting is held, with the approval of the executive committee.

Art. V. Special Meetings—Special meetings may be called at any time by the President, upon written application signed by five members.

Art. VI. Officers—The officers of this Society shall be: A President, two vice-presidents, a secretary-treasurer, and an executive committee composed of five members, of which board the President and Secretary shall be members, *ex-officio*.

Art. VII. Amendments—Any article of this Constitution may be amended at any annual session, provided that three-fourths of the members present favor it.

BY-LAWS.

Article I. Membership—Any physician, who holds the office of Secretary or Councilor in a County, State or District Medical Society, is entitled to membership so long as he holds such office. Should he resign, be removed from office, or be succeeded in office, his membership

in this Society will cease, and his successor will become a member in his stead.

SEC. II. The Secretary of this Society must be notified promptly by County Societies when new Secretaries are installed.

ART. II. Duties of Officers—The President shall preside at all meetings, and perform such other duties as the welfare of the Society may demand. The Vice-Presidents shall assist the President, and one shall preside in his absence, or at his request. The Secretary-Treasurer shall keep a record of the meetings, conduct the correspondence, and perform such other duties as may be required, keeping in close touch with the Secretary of the State Medical Society in all matters concerning medical organization.

ART. III. Election of Officers—The officers shall be elected by ballot at the annual meeting, and shall hold their respective offices until their successors have been duly elected and installed.

ART. IV. Dues and Assessments—No dues shall be paid in this Society, but an assessment to meet expenses may be levied upon the members, not to exceed one dollar each, in any year, after such assessment has been approved by the board of directors.

ART. V. No section in these by-laws shall be considered effective, if in conflict with the Constitution and By-Laws of the State Association.

ART. VI. Amendments—These by-laws may be amended and supplemented at any meeting, by a three-fourths vote of the members present and voting.

BOOK REVIEWS

STATE BOARD QUESTIONS AND ANSWERS. By R. Max Goepp, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Octavo volume of 684 pages. Philadelphia and London. W. B. Saunders Company, 1908. Cloth, $4.00 net; half morocco, $5.50 net.

This is the largest volume yet published, the material of which is selected from State Board questions given by the larger and more representative states. It contains nearly 700 pages and covers not only the elementary branches of medicine, but the fields of surgery, practice, etc. On the whole the questions are practical and sensible and most any student who has had the average training ought to be able to answer 70 per cent. of any selected set of questions. Some of the questions in anatomy will be difficult to answer, as are some of those in surgery. The best questions are found in practice and physical diagnosis. The arrangement of the subject matter is without fault and the book is interesting to read not only for those expecting to take the State Board examination, but for physicians who want to keep posted on lines of State Board work.

ARTICLES APPROVED BY THE COUNCIL ON PHARMACY AND CHEMISTRY.

LYSIDIN.

Lysidin $\left| \begin{matrix} CH_2.\ N: \\ \\ CH_2.NH. \end{matrix} \right. C.CH_3{=}C_4H_8N_2$, is a monatomic base derived from ethylene diamine.

Actions and Uses.—Lysidin is said to be a diuretic and is recommended as a uric acid solvent on the theory that, because it forms a very soluble salt with uric acid, it will facilitate the elimination of that substance. It is claimed that it is superior to piperazine. It is recommended in gout, lithiasis and the various forms of the so-called uric acid diathesis. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

MERCUROL.

Mercurol is an organic compound of mercury with nucleinic acid from yeast, containing 10 per cent. of metallic mercury.

Actions and Uses.—Mercurol does not coagulate albumin; it has marked bactericidal power and possesses the pharmacologic action of soluble mercury compounds. It is recommended as a local antiseptic application and as an antisyphilitic remedy. Dosage.—0.03 to 0.12 Gm. (½ to 2 grains). Manufactured by Parke, Davis & Co., Detroit, Mich.

MESOTAN.

Mesotan, $C_6H_4.OH.COO(CH_2.O.CH_3){=}C_9H_{10}O_4$, is the methyl-oxymethyl ester of salicylic acid, analogous to wintergreen oil.

Actions and Uses.—The action of mesotan is similar to that of oil of wintergreen, but it is more irritating to the skin. Dosage.—Being quite irritating when applied pure to the sensitive skin, it is employed diluted with an equal volume of olive oil, and without friction. Simple application to the affected part, which need not be covered, or, if so, only slightly, suffices to give prompt relief. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

METHAFORM.

A name applied to chlorbutanol (which see). Manufactured by F. Stearns & Co., Detroit, Mich.

MIGRAININ.

A mixture of antipyrine 85 parts, caffeine 9 parts and citric 6 parts.

Actions and Uses.—It is antipyretic and analgesic, combining the actions of its components. Dosage.—0.4 to 1 Gm. (6 to 15 grains) in powder, cachets or tablets, the dose being repeated once or twice during the day. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

NEUROCAINE.

Each billet contains cocaine hydrochloride 0.05 Gm. (1-12 grain), without excipient. The billets are ⅛ inch long, 1-20 inch in diameter and very soluble. Neurocaine is used for pressure anesthesia or as a local anesthetic in dental practice. Prepared by Schieffelin & Co., New York.

NEURONIDIA.

An elixir said to contain in each 8 Cc. (2 fluidrams) 0.26 Gm. (4 grains) of veronal (diethylmalonylurea in a menstruum containing 35 per cent. of alcohol, with aromatics.

Dosage.—(8 to 16 Cc.) (2 to 4 fluidrams). Prepared by Schieffelin & Co., New York.

NUTROSE.

Nutrose is a sodium salt of milk casein, containing 65 per cent. of proteids.

Actions and Uses.—Nutrose is recommended as a non-irritant nutrient in wasting diseases, such as the cachexias in carcinoma, anemia, diabetes, etc., and in acute and chronic febrile ailments, such as pneumonia, typhoid fever and tuberculosis. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening Hoechst a. M. (Victor Koechl & Co., New York).

[TO BE CONTINUED.]

AMERICAN MEDICAL ASSOCIATION.

Next Annual Meeting at Atlantic City, N. J., 1909.

President: HERBERT L. BURRELL, Boston.
President Elect: WM. C. GORGAS, Ancon, Panama.
Secretary and Editor: GEORGE H. SIMMONS, 103 Dearbon Ave., Chicago.

MISSOURI STATE MEDICAL ASSOCIATION.

Next Annual Meeting, Jefferson City, May 18, 19, 20, 1909

President: A. R. KIEFFER, St. Louis.
Vice Presidents:
D. B. FARNSWORTH, Springfield; W. J. FRICK, Kansas City; J. B. NORMAN, California; C. H. DIXON, Holliday; M. A. SMITH, Gallatin.
Secretary: A. W. McALESTER, Jr., Kansas City.
Assistant Secretaries: WILLARD BARTLETT, St. Louis; W. R. PATTERSON, Tipton; T. McLEMORE, Nevada.
Treasurer: J. FRANKLIN WELCH, Salisbury.

Medical Section.

Chairman: E. E. GILMORE, Adrian. Secretary: W. R. PATTERSON, Tipton.

Surgical Section.

Chairman: PAUL Y. TUPPER, St. Louis. Secretary, WILLARD BARTLETT, St. Louis.

Eye, Ear, Nose and Throat Section.

Chairman: J. H. THOMPSON, Kansas City. Secretary, T. McLEMORE, Nevada.

ORATORS.

Oration on Medicine:

R. H. GOODIER, Hannibal.

Oration on Surgery:

F. J. LUTZ, St. Louis.

COMMITTEES.

Committee on Scientific Work.

E. E. Gilmore, W. R. Patterson, Paul Y. Tupper, Willard Bartlett, J. H. Thompson, T. McLemore.

Publication Committee.

W. B. Dorsett, Chairman; M. B. Clopton, M. C. Shelton.

Committee on Public Policy and Legislation.

H. E. Pearse, Chairman; R. M. Funkhouser, F. R. Newberry.

Defense Committee.

F. J. Lutz, Chairman; W. B. Dorsett, Joseph Grindon.

Committee on Medical Education.

B. M. Hypes, Chairman; C. M. Jackson, O. B. Campbell.

Committee on Tuberculosis.

E. W. Schauffler, Chairman; Geo. Homan, J. R. Lemen, W. E. McKinley, J. R. Boyd.

Missouri Society of Medical Secretaries.

President, Foster W. Burke, Laclede; First Vice-President, M. A. Smith, Gallatin; Secretary-Treasurer, Chas. Wood Fassett, St. Joseph.

COUNCILLOR DISTRICTS AND COUNTIES IN EACH DISTRICT.*

F. J. LUTZ, St. Louis, Chairman. E. J. GOODWIN, St. Louis, Secretary.

First District.—Councillor, C. L. Evans, Oregon. Counties: Holt, Atchison, Nodaway.

Second District.—Councillor, W. T. Elam, St. Joseph. Counties: Buchanan, Andrew.

Third District.—Councillor, G. W. Whitely, Albany. Counties: Harrison, Worth, Gentry, DeKalb.

Fourth District.—Councillor, C. R. Buren, Princeton. Counties: Grundy, Sullivan, Mercer, Putnam.

Fifth District.—Councillor, E. E. Parrish, Memphis. Counties: Clark, Scotland, Schuyler.

Sixth District.—Councillor, H. Jurgens, Edina. Counties: Adair, Knox, Lewis.

Seventh District.—Councillor, L. W. Dallas, Hunnewell. Counties: Shelby, Marion, Ralls.

Eighth District.—Councillor, W. B. Dorsett, St. Louis. Counties: Lincoln, St. Charles, St. Louis, Pike.

Ninth District.—Councillor, A. R. McComas, Sturgeon. Counties: Audrain, Boone, Howard, Callaway, Warren, **Montgomery.**

Tenth District.—Councillor C. W. Reagan Macon. Counties: Macon, Randolph, Monroe.

Eleventh District.—Councillor, J. D. Brummall, Salisbury. Counties: Chariton, Carroll, Livingston, Linn.

Twelfth District.—Councillor, E. H. Miller, Liberty. Counties: Platte, Clay, Ray, Clinton, Caldwell, Daviess.

Thirteenth District.—Councillor, F. E. Murphy, Kansas City. County, Jackson.

Fourteenth District.—Councillor, C. T. Ryland, Lexington. Counties: Lafayette, Saline, Cooper.

Fifteenth District.—Councillor, M. P. Overholser, Harrisonville. Counties: Cass, Johnson.

Sixteenth District.—Councillor, J. R. Buchanan, Nevada. Counties: Bates, Vernon, Barton.

Seventeenth District.—Councillor, R. D. Haire, Clinton. Counties: Pettis, Henry, Benton, St. Clair, **Hickory.**

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ORIGINAL ARTICLES

A BRIEF CONSIDERATION OF POST-OPERATIVE GAS DISTENTION OF THE ABDOMEN, WITH SUGGESTION FOR PREVENTION.*

BY FRITZ J. MOENNIGHOFF, M. D., KANSAS CITY, MO.

It is not my purpose to include within the scope of this paper a discussion of those post-operative distentions of the abdomen due to strangulation ileus and septic peritonitis; but to sum up a few facts upon those concomitant to paralytic, dynamic and pseudo-ileus and intestinal atony.

The intestines have the function of absorbing gas from their lumen. This function is dependent upon their blood supply. The explusion of gas through the anus is dependent upon the tonus of the muscular fibers. A lack of muscular tone allows the collection of gases in greater quantity than the absorptive power or capacity of the gut can accommodate, hence a resulting embarrassment of the circulation rapidly ensues on account of the distention of the bowel walls. Thus, we have the formation of a vicious circle.

In dynamic ileus of Nothnagel we deal with just such a condition, a failure of the normal peristalsis. Physiologically we have two nervous influences affecting the intestinal movements. The intrinsic automatic center is the myenteric plexus of Auerbach, the extrinsic is chiefly the splanchnic nerves. It has been proven beyond a doubt that the splanchnic nerves are purely inhibitory. It has also been proven that the intestines retain their normal motor functions for weeks, after the splanchnics have been severed; but that all reflex and spontaneous movements cease when the myenteric plexus of Auerbach has been destroyed. Quoting Cannon

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and Murphy we should expect failure of peristalsis to follow inhibitory impulses through the splanchnic nerves, or to result from injuries or disturbances to the myenteric plexus, or from trauma to the muscles themselves. In other words the cause of dynamic ileus may be general, by way of the central nervous system, or it may be local in the inefficacy of Auerbach's plexus or the muscles which that plexus controls. They have proven that it is possible to produce reflex dynamic ileus experimentally and thus substantiated Nothnagel's theory of functional disturbance of the bowel in cases of crushed testicle and in abdominal injuries and in attacks of biliary and renal colic. Nothnagel and other contributors to the literature mention cases of ileus after aseptic laparotomy where no cause of intestinal paralysis was apparent macroscopically as to trauma or sepsis Krehl mentions the possibility of hysterical paralysis of the intestines, on the ground that hysterical paralyses are common enough in other parts of the body.

On the other hand Kocher believes that dynamic ileus is seldom if ever functional, but maintains that it is due to inflammatory and circulatory disturbances. Munro, in his paper before the American Medical Association holds the same views. Most of this discussion can be eliminated if we accept the classification of V. Mikulicz of ileus into three groups: (1) Strangulation ileus; (2) obturation ileus; (3) paralytic ileus.

Paralytic ileus, including intestinal atony occurs more frequently, to a more or less pronounced degree, than most of us realize. Vineberg, quoting Pankow, says that the intestines are in a condition of atony for a period lasting from three to four hours after every opening of the peritoneal cavity. Several causative factors have been recognized, viz., prolonged narcosis, manipulation and handling of the intestines, exposure to the air, injury and traction of the mesentery, preparatory and post operative care.

I believe that the amount and duration of narcosis plays a very small part in the production of atony and intestinal paralysis. I have seen patients under the influence of anesthesia for almost three hours, who showed no signs of this trouble; whereas others, who required only a small amount of the anesthetic rapidly showed signs of distention. Any operation which requires any considerable amount of exposure to air and cooling of the intestines has been, in my experience, productive of distress from gas. The same is true of manipulation and handling of the intestines. I find it possible to reduce the number of cases of distention by keeping the intestines protected with sponges soaked in warm normal salt solution. It is also an improvement in technic to use sponges, moistened in saline solution, to wall off the operative field, instead of dry ones, which injure the neuro-muscular mechanism of the gut wall. I agree with Vineberg that badly adherent and inflamed adnexa, especially on the left side when the sigmoid and rectum are involved, often, unless great precaution is taken in breaking up and separating adhesions to the

gut and mesentery, produce as a sequence symptoms of post-operative ileus. Kader has demonstrated that injuries to the mesentery produced severer symptoms than injuries to bowel wall alone. Preparation and post-operative care have received more than their share of the blame as causative factors in this condition of paralyticus intestinalis. Some operators purge their patients freely for days before the operation, and also give only a weak diet; others use scarcely any preparation other than a cathartic the night before and a liquid tray for supper. Some begin the use of calomel in 24 hours after operation, others wait nearly a week for indications for its use. Some feed slowly; others more rapidly. Some keep their patients in bed for two or three weeks; others get them up quickly. My opinion is that preparation and after care are almost nil as causative agents of atony. My method is, to give a cathartic the night before, liquid tray for supper, and a cup of broth early in the morning. If the cathartic has acted freely no enema is necessary; otherwise, a soapsuds enema is given, which easily clears the bowel in a short time. Most of my patients, unless there are special contraindications, receive a general tray at the end of a week. No cathartic is given for at least three or four days, unless otherwise indicated. I also allow all, except drainage cases, to get up and walk early. I find this method conducive to good results.

Many preventive measures for post-operative distention have been employed and found wanting. The latest preventive drawn to our attention is eserine salicylate. Since 1901, when Von Noorden published his monograph on the use of eserine, several investigators have been testing its merits and publishing their results. Among these are Offergald, K. Vogel, A. Oppenhein, Pankow, Arndt, and in this country, Elsberg and Vineberg of Mt. Sinai Hospital, New York.

Von Noorden used this remedy in several cases of meteorism and also reported good results in a case of obstruction. He praises it highly.

In 1904, Arndt described his experience with eserine as life saving. He says it is well tolerated by debilitated patients. Where he fails to receive prompt relief he also employs stomach lavage, especially when he suspects gastric atony, after use of the Trendelenberg position.

K. Vogel was the first to use eserine as a prophylactic. He gives the first injection before the patient leaves the table and gives subsequent doses if needed. He warns against using eserine after ileus has fully developed.

In the latter part of 1907, Vogel reviewed the literature on eserine and gave further experiences of its subcutaneous use as a peristaltic. Second operations on patients treated by this measure showed that the drug was effective in preventing the formation of adhesions. He believes it most useful and effective in cases of general and abdominal contusion. He usually gives a glycerine enema as an adjuvant to the eserine, the glycerine acting on the lower bowel only. Vogel does

not believe in too energetic purging before a laparotomy, but usually empties the bowels of old fecal matter two days before operation by means of castor oil, thus giving the bowel time to recover from any exhaustion.

Pankow reports his results of the prevention of post-operative intestinal paralysis by eserine as entirely negative.

Offergald suggests the use of eserine, nicotine and strychnine as prophylactics.

Vineberg, giving his own and Elsberg's experience with eserine at the American Gynecological meeting, 1907, said that, as a phophylactic it seems to be free from danger and worthy of an extended trial. Thus far, the evidences are in favor of its being of some value. It would seem to be of special value to counteract the probable paralyzing effect upon the intestine by the morphine which most patients need during the first few hours after laparotomy.

Dr. Rufus B. Hall, of Cincinnati, said at the Southern Surgical and Gynecological Association meeting, 1907, that eserine usually expelled the flatus in an average of 40 minutes. It failed to give results in only one case out of twenty in which he had used it during the previous two years.

About two years ago I began using eserine salicylate hypodermatically in cases of laparotomy, as a prophylactic against distention. I usually give the initial dose (gr. 1-40) immediately after the patient is returned to bed. Subsequent doses are given if occasion requires; but I have found this necessary in only four cases, two of which presented symptoms of slight infection. Like Vogel, I have often been required to use an enema to remove the flatus from the lower bowel. From his experience I believe, clinically, that the influence of eserine is exerted only on the small bowel. I have never seen any bad after effects from the employment of eserine and believe it can be used with impunity in proper cases. I have never used it in cases which came to operation with any marked degree of peritonitis, but have used it several times, successfully, in cases of appendicitis with slight peritonitic invasion. Have used it twice with success in cases of walled off appendiceal abscess, but not as a prophylactic.

In aseptic laparotomies it has worked as a charm, but has failed sometimes in those where infection was apparent. Flatus is usually moved in from one to four hours; by this I mean that it is either expelled spontaneously, or brought to the lower bowel where an enema soon relieves it. I have had no opportunity to see if it prevented adhesions, as Vogel claims and Ochsner denies. During the time that I have used this remedy, meteorism and distention have ceased to be a source of post-operative annoyance.

In two cases with severe meteorism my friend, Dr. H. E. Pearse, used a 500 candle-power leucodescent light to see if it would not help in easing the patients, with the result that the expulsion of gas began almost

immediately. This is in line with Gelinsky's theory of the use of superheated air in the after treatment of laparotomies. He applies it to the abdomen twice daily for twenty minutes. Its advantages he claims are the prevention of adhesions, promotion of absorption, and especially, the stimulation of peristalsis. Gelinsky is convinced that superheated air aids the peritoneum in its struggle against invading infection.

Conclusions: I. Eserine in the majority of cases moves the flatus.

II. Enemas are frequently needed as adjuvants.

III. It produces no bad after effects and can be used with impunity in proper cases.

IV. Where it fails to produce good results, infection likely has gained a foot-hold.

V. In aseptic laparotomies it undoubtedly acts as a prophylactic against atony.

VI. It causes expulsion of flatus in from one to four hours.

VII. According to Vogel it prevents adhesions.

VIII. Gelinsky's method is worthy of further trial and study.

513 Rialto Building.

A Doctor in the Arctic.—Dr. James F. Rymer will shortly gain the distinction of being the first qualified British medical man to take up his residence in the Arctic Circle. After serving eight years as medical officer at the Carthusian Monastery in Sussex, Dr. Rymer went to Canada and for the past six months has lived at Edmonton, Alberta. Recently he left there on a lonely journey of 1,800 miles along the Athabasca and Mackenzie rivers, his destination being Fort Good Hope, which is about 100 miles within the Arctic Circle. He does not propose to return to civilization for at least three years. He has sufficient medicine in concentrated forms to last at least one year and has arranged for more to be forwarded. His patients will be the Indians and Esquimaux in the vicinity of Fort Good Hope and Fort Macpherson. Several diseases and fevers often break out among them, and, as they have no skilled attention, the loss of life has been enormous. The doctor can speak French, which is the only language other than their own which the Indians understand, and intends to start the study of the languages of the Indians and Esquimaux directly he arrives. At his headquarters he will not have more than five white companions, these being connected with a Roman Catholic mission and trading post.—(London Letter, Journal A. M. A.)

INFECTIONS OF THE KNEE-JOINT AND TREATMENT.*

BY WALTER C. G. KIRCHNER, M. D., OF ST. LOUIS.

The subject of infections of the knee-joint is a broad one, and a consideration of the condition in all its phases would require more time than is at our disposal. The condition may readily become so serious that the importance of prompt and efficient treatment should be recognized. In many cases, the infection is permitted to advance until amputation seems the last resort. We wish to consider the treatment of infection of the knee-joint in a more conservative manner, so that a cure may be effected without sacrificing the extremity.

The knee-joint is most often infected by penetration or injury in which bacteria are carried either directly into the joint cavity or secondarily through extension of infection of bursae or of tissue surrounding the joint. Injuries caused by nails, bullets, by scratches or lacerations of the knee are most frequent. Contusions and compound fractures may also be a cause of infection, and when associated with fracture the danger is very great. The infection is sometimes carried by the blood to the joint, and the joint may become involved in cases of osteomyelitis. Tuberculosis, gonorrheal synovitis, rheumatism, syphilis, tumors, etc., cannot be taken up at this time.

The diagnosis of the true condition is very important, for upon the nature of the trouble will depend the treatment. At times it is very difficult to understand the true condition. Acute infection of the joint is so often mistaken for tuberculosis and especially for rheumatism that the knee-joint is sometimes completely destroyed before the real condition is recognized.

Gonorrheal arthritis, chronic synovitis and osteomyelitis are conditions that should be carefully considered in our diagnosis of the trouble.

Acute infections of the knee-joint are so serious that the prognosis is usually grave. After a more or less sudden onset, which is accompanied by fever, if left to itself a septic course ensues with great damage to tissue. When the pus is in the joint and is under pressure, there is great pain; but this is much less when the pressure is relieved, either by opening the cavity or when the pus extravasates or burrows into the surrounding tissue. Pus about the knee-joint may burrow in many directions and the involvement may become very extensive. The pus may be confined to the bursae or to the joint-cavity itself. If the pus is allowed to remain, the synovial membrane is likely to be attacked and necrosis of bones and osteomyelitis may result.

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*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

The ligaments may soften and become eroded, and there may be a complete luxation or in the young separation at the epihysis. There may be multiple metastatic abscesses, and the process may cause phlebitis involving the pelvic veins and of the veins of the opposite leg. In hospital work, I have had occasion to see all these complications and many unfortunate results could have been avoided had the real condition been earlier recognized. The nature and severity of the trouble is greatly dependent upon the character of the infecting organisms.

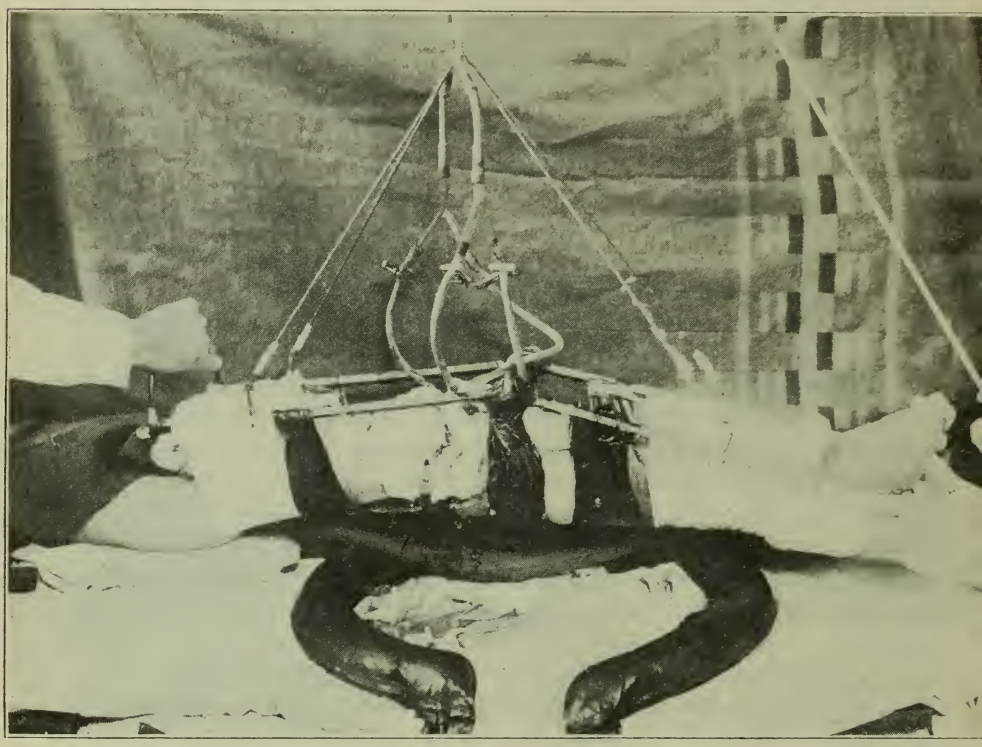
From the standpoint of treatment, it is most important to bear in mind the anatomical relations. The bones of the knee-joint are firmly bound together, and held in place by the ligaments, capsule and tendons. The tissues about the joint are resistant and are very tense. In the treatment, the size, shape, and location of the bursae should be remembered, for they are often connected with the joint-cavity and their importance as receptacles for infectious material should not be lost sight of. The posterior or popliteal fascia is also of importance for consideration, and because of its position and resistance infection or pus may be encouraged to travel up the thigh or down the leg. An understanding of these relations is most important in the establishment of satisfactory drainage of the knee-joint and the regions surrounding it.

The treatment of infection in the knee-joint or near the knee-joint depends largely upon the character and mode of infection and severity of the trouble. Where infection is carried to the joint through the blood stream, the diagnosis at times is very difficult, and the nature of the condition can only be made out by direct examination of the contents of the joint-cavity or bursae. Exploratory puncture furnishes an excellent means. In making this puncture, it is best first to incise the skin and to use a rather large needle or trocar. Small aspirating needles are often unsatisfactory because on account of the contents, which at times is so thick or of a gelatinous nature, a satisfactory specimen cannot be obtained. In puncture and gunshot wounds about the joint, it is best not to probe the wound, for this may only tend to carry infection. It is much better to enlarge the opening by incision so that free drainage is established. Modified dressing, consisting of moist, antiseptic gauze and dry absorbent cotton, will be found very useful in the preliminary treatment of these conditions.

If the patient is running a septic course, or if the condition has been ushered in by chill and fever, and there is pus in the knee-joint, radical measures should be pursued to relieve the joint of further complications. Mere puncture and small incisions for the sake of drainage, as a rule, accomplish little. If the infection has not advanced very far and if the pus is still located at the upper portion of the joint, long incisions on either side of the patella with through and through drainage may bring about a good result. This procedure, however, is only to be recommended in the earlier stages of infection, where thorough drainage can thus be established. If the patient's condition is not at once relieved

by this operation, or if the accumulation of pus demands more complete drainage, free incision should be made on either side of the knee and across the patella tendon so that by lifting up the flap which contains the knee cap, the entire joint may be exposed.

In most cases, the bursae themselves contain large quantities of pus. The prepatellar bursa should be opened, drained and packed. The large suprapatellar bursa should be thoroughly opened up and drained. All pus cavities should be followed up with the finger, and counter and through and through drainage established by means of rubber tubes.



As a rule, it is best to have an opening in the popliteal space to prevent burrowing of pus, and, unless the joint cavity has dependent drainage, it is difficult to free it from pus accumulation.

In establishing drainage, hemorrhage can be avoided by introducing forceps or scissors, and by means of blunt dissection and separation of the blades, an opening can be made so that drainage can be established. This method is particularly of service in making an opening through the popliteal space where there is danger of injuring important nerves and vessels.

All cavities and bursae having been thoroughly opened up and dependent drainage established by means of rubber tube, the extremity

should be so immobilized that subsequent dressings can be properly attended to.

In the cavities thus drained, there is a tendency to the reformation of pus, and unless great care is exercised the process is likely to extend and pockets of pus will re-form. It is important, therefore, to avoid this condition and by means of continuous irrigation, constant drainage of the wounds is brought about and there is opportunity for the formation of healthy granulation tissue.

In our experience, we have had good results in the method of continuous irrigation, and extremities which, otherwise would have been sacrificed, have been saved. In carrying out the method of continuous irrigation of the knee-joint, a number of conditions are at once encountered. It is important that the patient be placed in a comfortable bed, and it is desirable that the mattress have a section removed on the side of the injured extremity for convenience when dressings are made. The extremity may be placed on a posterior, or a Cabot splint, or in a Hodgen splint so modified that the wound may be easily dressed and that the limb rests in the splint as if it were in a hammock. This latter method gives the patient greatest comfort, allows change of position in bed, and the use of bed pan, and permits hygienic measures to be more easily carried out.

Plaster casts with windows have been used, but are of service only when the infection is limited and is well under control. In the earlier stages of treatment, a cast will prevent a thorough examination of the extremity, and progress of infection cannot be ascertained.

For continuous irrigation, a number of nozzles with properly arranged stopcocks should be employed, and the saline solution should be permitted to thoroughly irrigate all parts of the knee-joint. Great care should be taken to protect the synovial membrane, for there is danger of necrosis when exposed. The aim should be to encourage the formation of granulation tissue as quickly as possible, and thus to obliterate and fill in all pus pockets. The tubes should be replaced by bundles of silk-worm gut, and, as the healing progresses, each day a few strands should be removed until the sinus is completely filled in. All tubes and drains should be removed from above downward, so that the dependent portion is the last to heal. The continuous drainage having been discontinued, and healthy granulations having been established, the extremity may be placed on a posterior splint so arranged that daily dressings can be made.

The accompanying photograph shows a method of continuous irrigation that has been used with success in the treatment of these conditions.

The treatment of this condition requires a great deal of patience and judgment, and the patient's general condition must be carefully looked after. With good drainage, good food and plenty of fresh air, satisfactory results may be expected.

In two of the cases thus treated, ankylosis of the joint, which was anticipated, did not take place, the results, therefore, being most gratifying. For those who have patience and judgment, and who wish to use conservative measures in the treatment of infections of the knee-joint, this method may be of some service.

DISCUSSION.

Dr. John D. Seba, Bland: The knee-joint is of special interest to me since I have had several bad knees. I have learned a few things, and one is, that whenever you have an infected knee-joint and you cannot make it any worse you had better open it up and see what is going on. The fact is too many of us simply depend upon nature to heal. I have seen knee-joints that could not be made worse by operation. By operating and letting out the pus and serum and draining and using massage, even if you have to do it under chloroform, you will often have a good joint, where otherwise you would have a stiff one.

Dr. Kirchner, in closing: The speaker brought out exactly the point I wish to make, that in these cases it is a great deal better to open up the cavity of the joint and see what is going on than to allow the pus to destroy the knee.

The Crusade Against Tuberculosis in Ireland.—The crusade against tuberculosis in Ireland has been described in previous letters. The most important step was the founding by Lady Aberdeen, in 1907, of the Women's National Health Association to arouse the women of Ireland to the fact that each year almost 12,000 of the people die of consumption. She organized the tuberculosis exhibition and its success was so great that when the time came for it to start on a tour through Ireland so many towns asked for it that two exhibitions had to be prepared—one for going north and the other south. Up to the present these exhibitions have visited 60 towns and over 700,000 people have attended them—about one-sixth of the population of Ireland. The question may be asked, will all this produce any lasting benefit? Already it has done so. In Dublin a system of home nursing for consumptives has been introduced by means of the coöperation of the medical staffs of the hospitals and the Women's National Health Association. Many other towns are following this example. In consequence of the educative effect of the exhibitions guardians of the poor and urban councils are putting up chalets, sheds, etc., in which tuberculous patients can be treated. These sheds are inexpensive, and being erected on the grounds of the hospitals, their cost of keeping is small.—(From London Letter, Journal A. M. A.).

PROPHYLAXIS OF FATTY DEGENERATION OF THE HEART MUSCLE.*

BY B. H. ZWART, M. D., KANSAS CITY, MO.

There is none to gainsay the importance of the prophylaxis of fatty heart, none, I believe, who would deny the meagerness of literature concerning it, and none who has not felt his helplessness when dealing with an advanced degeneration. Do we not, perhaps, permit fear and a sense of helplessness to be a barrier to putting forth our best efforts in staying the ravages of an oncoming degeneration? For one I say aye, and whilst I have nothing new to offer, if what I shall say arouses within you an optimism in regard to its prevention and treatment, my labors and your patience and attention shall have been rewarded.

Optimism? Yes, truly; for I am an optimist in the treatment of incipient disease, a hopeful and determined adversary to advanced conditions, and one who believes in marshaling every reserve, be it medicinal, mechanical or otherwise, that can aid the resourceful physician when death stands ready to claim another victory.

I believe that myocardial degeneration is a more common condition than is generally supposed. I believe that we too often overlook its stealthy approach, and I believe that these errors of omission are ofttimes inexcusable in the light of our present day knowledge. This is not as it should be, for we are guilty of a wrong when we permit, through carelessness, a condition so amenable to treatment, to eventuate in one which resists every known method of cure.

I am not a heretic when I say amenable to treatment, for I know men who have had fatty hearts who now have hearts that are normal, at least to the extent that no abnormality can be diagnosed; men whose careers of usefulness seemed to have ended who now are men of affairs, men in whose hands are entrusted the fortunes of astute business men. Far be it from me to aver that a heart whose floodgates have been irreparably damaged, one in which nutrition has for years performed the herculean task of increasing the strength and size of the heart muscle that it may meet ever-increasing requirements, can be restored to the normal; no, Samson-like, its strength may for a time return, goaded on it may fill vessels, for a long time emptied, but this desparate effort must soon end in stillness, for even the masterpiece of the Creator is amenable to the laws of nature, and dust to dust shall ever return. But this is no cause for disouragement, for there is much we can do and if the surgeon extends the span of life by respecting the laws of nature,

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

we, too, should add to the sum total of human happiness if we correctly interpret these laws.

That we may successfully treat disease we should study the cause, and this applies more particularly to prophylaxis. Given the cause, intelligent directions may avert threatened disaster. Fatty heart means but little to him who would better the condition of fellow man; of more value is it to know that some toxin disturbs the organism or that mayhap a mechanical fault exhausts nature's powers. Of prime importance is it to remember that fatty heart steals upon us clothed in the garb of many diseases. We are too prone to pronounce normal that heart which presents no evidence of valvular disease, and to forget that infectious diseases, chemicals and autointoxications, as well as mechanical agencies, may involve the myocardium without first involving the serous structures. True endo- and pericardial inflammations may affect the muscles by extension of the inflammatory process as well as on account of the mechanical influences, and the resulting myocarditis ends in a fatty degeneration just as certainly as does a primary myocarditis.

So long as the myocardium receives normal blood its integrity is maintained in face of a considerable coronary degeneration, or other cardiac disease. A vitiated blood just as surely quickly brings disaster. We know little of the vitiation of the blood by autointoxication and perhaps less of this vitiated blood as a causative factor in disease, nor why, in one of a pair of otherwise similar cases, it causes an irritable heart and in the other a flabby cardiac musculature unresponsive to stimulants, but the fact remains that the myocardium *is* affected, by what, in our imperfect knowledge, we term autointoxication. Neither is it necessary that to have an autointoxication we must have a gastrointestinal symptomatology, for we may have it dependent upon failure of function in any organ concerned in the complex function of metabolism. The muscle itself may aid in the autointoxication, as, for instance, in the retrograde process affecting an hypertrophied heart. Here is a muscle which in response to the law of supply and demand has increased in strength and bulk until the increased demand ceases or supply can no longer respond to demand; in either instance the equilibrium is no longer maintained and supply being deficient the hypertrophy becomes superfluous and must be removed. The excess of musculature invites a fatty degeneration and the degenerative process tends to autointoxication.

Such a heart we find in the athlete who no longer keeps up his unremitting exercise or in the laborer, who, having gained a competency, seeks ease and comfort in his declining years, or who has an hypertrophied heart and must perchance undergo an operation. The enforced rest, coupled perhaps with the effect of the anesthetic on the heart muscle, makes the hypertrophy unnecessary and the degeneration begins and continues till judicious treatment stays it or compensation ruptures.

Uremic poisoning, anxiety, fear, shock, neurasthenia, another name for autointoxication, are causative factors we must at times deal with and

alcohol and nicotine in different ways often demand attention. The saddest cases we meet are those jolly, whole-souled, fat fellows whose mission on earth seems to be to have fun and radiate happiness, who come to us with the story of heart hurry or distress after slight effort.

In these a fatty infiltration is increasing the bulk of the heart and lessening its power; thus handicapped, they more and more avoid physical effort and all too soon pressure brings on degeneration. Saddest I say, because we can ill afford to consign to an early grave those who add to the joys of their fellow man, and because these curable cases are often overlooked. These *are* curable cases and we are guilty of a crime do we not recognize them early.

These few thoughts on the causation must suffice, but it must not be forgotten that almost any departure from health continuing for a considerable time may favor the development of this condition, and that the permanency or transitory nature of fatty degeneration depends more upon the duration of the infecting process or mechanical interference than upon any other of its phases, and for this reason we should ever be on the alert to detect, and if possible, correct, such departure from the normal.

In this age, it is incorrect to say that a positive diagnosis is impossible; the physical signs alone are sufficient to diagnose, and, in conjunction with the subjective symptoms, are easily interpreted, but we should not wait for a positive diagnosis to begin prophylactic measures; better is it to condemn to treatment such hearts as arouse in the mind of the competent man a suspicion of its presence, and to remember that anything which disturbs nutrition for a considerable period of time is more than apt to damage the heart muscle. Ordinary care is all sufficient in the most of these cases and with them we need not deal.

When, however, nature seems unable to cope with the condition, active measures are indicated.

It is manifestly impossible to consider the detail treatment of a condition with so varied a causation, but grossly stated it means: (a). Suggestion. (b). Removal or modification of the cause. (c). Improvement of nutrition. (d). Exercise. (e). Rest. (f). Medicinal.

Suspects should be placed in active training just as thoroughly as is the athlete preparing for a meet. To this end the importance of the treatment must be placed before the patient in such a manner as to arouse his enthusiasm; a prize must be hung up to stimulate him to his greatest endeavor; suggestion is a powerful means and that the physician may suggest profitably he must himself be enthusiastic.

Patient and physician must make a business of treatment; for either to enter upon it in a half-hearted way invites inevitable failure.

Keep prominently before the patient the goal and the reward, and if at any time these do not appeal to him as being worth the effort, give him to understand you are not willing to continue. To my mind enthusiasm and earnestness are as essential on the part of the physician as on the part of the patient, and suggestion of improvement is a *sine qua*

non. In this we are often wanting in our efforts. The patient should be given to understand that zeal alone can accomplish aught and I frequently impose a placebo, as it were, by requiring a self-denial not absolutely necessary. The mental placebo accomplishes as much as does the medicinal and is a potent means to the end.

We cannot enter into the consideration of the treatment of the cause. It goes without saying that this varies according to whether an inflammatory cardiac disease, an infectious disease, a toxic condition, or a fatty infiltration is the precurser, but whatever the cause it is all important and must be vigorously attacked.

The improvement of nutrition suggests the care of the digestive apparatus, correction of fermentation and the dietary, for it matters much whether nutrition is above or below normal. Habits nearly always need to be corrected and occupation may have an important bearing. The medicinal treatment is mainly concerned with this part of the treatment, though other considerations, such as blood pressure, etc., enter into it.

Given, then, a case which resists ordinary treatment, or which does not yield to the treatment thus far given, we must add those more potent means now to be outlined. Every phase of the case is to be studied, frequent observation is insisted upon, habits are more clearly examined into and corrected, hours of rest and play are prescribed, and the patient is carefully instructed as to exercise—he is placed on the training table. The patient is required to retire at 10 p. m. and to waken at 6 a. m. He is instructed to lie awake 10 or 15 minutes before arising that the weakened muscle may have time to adjust the circulatory equilibrium, after which 15 minutes are devoted to exercise of every muscle by resisted movements.

Minute instructions are given as to these movements, which become more vigorous as the heart improves, though always slowly made, and of greatest importance is it that the difference between exercise and violence be realized, for violence is potent for great harm.

After exercise a drink of cool water with perhaps a stimulant, and then the bath. The temperature of the water should be such as to be agreeable to the individual, with friction and resisted movements whilst in the tub, followed by massage for 15 minutes. After massage, 15 minutes of rest, mental and physical, and then robing for the day. The clothing should be light in weight and adjusted to meet the varying requirements of the thermometer and barometer.

Nothing should be worn which restricts the circulation; hose supporters encircling the legs are tabooed, loose neck bands and waist bands are required,—in a word, comfort and freedom of movement are sought for.

Having robed for the day the patient is eager for breakfast, which should be one of the best meals of the day, and like all other meals, is to conform to the prescribed dietary. After breakfast rest, with a clear Havana if it conduces to comfort and has not been interdicted. Of importance is it that the cigar should be free of adulteration, for nicotine

is poisonous enough without adding other irritants. Having rested, a walk in the open air, brisk or otherwise, but always with the idea of exercising, is indulged in and regulated as to length by the power of endurance of the patient. A rest after the walk prepares the patient for the labors of the day and if 15 minutes periods of rest in the recumbent position can be stolen from the hours of toil, all the better, but at all events during these hours restricted movements are advised unless the character of work is such as to make them unnecessary. The patient is told to get as much sunshine as possible and if the grand luminary is wasting his influence behind the clouds, he himself must furnish the sunshine. He must be optimistic at all times and entertain none but happy thoughts, for it has well been said, "we live as we think." Thus the entire day is allotted in hours of work and play, but always rest after exercise and meals. He is warned against anxiety, worry and hurry, and must be taught to see and enjoy the joys of nature, for after all no joys are so great as those furnished by nature, free of the artifice and glamor of the joys made by man. In seeking pleasure or wealth he must avoid frenzy and yet drink deep at the fountain.

The day being spent, 15 minutes are again given to resisted movements, 15 minutes to cool sponging and massage, and then health-restoring sleep.

I do not believe that too much sleep furthers the welfare of the patient and I prescribe eight hours, for remember we are dealing with incipient lesions not with hearts no longer able to perform their function.

You may say the regimen is rigorous, but I say to you the prize is worthy of it. To accomplish much we must demand much and after a short while the patient becomes fascinated with the treatment and must often be restrained lest in his eagerness he substitute violence for exercise.

The punching bag, the dumb bell, weights and sprinting have no place in his treatment, but always slow, studied and restricted movements.

With such treatment I have seen restored to health and ready again to take up the burdens of life with joy, men who had felt that their race was run. I have seen high arterial tension lowered and a low one raised, a weakened and shortened heart sound made normal, a blanched cheek freshened till it glowed again with the life current so in contrast with the ashy pallor. And I have seen the halting step changed to the sprightliness of youth.

Pathologists have told me naught can stay the progress of a degeneration once begun and I am willing to subscribe to this view, as they see it, for my enthusiasm has never emboldened me to attempt a cure after they had demonstrated the presence.

DISCUSSION.

Dr. C. A. Good, St. Joseph: We must all recognize at the outset that these people don't consult the physician early. As to the etiology, not much has been added for several years and there will not be much

added until our knowledge of physiology and pathological chemistry is more advanced. Many of us could make an earlier diagnosis if we paid sufficient attention to our patients and noted the physical signs. I know that I am sometimes unable to tell whether a heart is competent or not, but by taking the blood pressure before and after moderate exercise the result is often enough to put me on my guard. The treatment of this condition cannot be separated from the treatment of the patient as a whole. The essayist's treatment is admirable, but his method applies to the individual as a whole and not in particular to the heart. Myocardial degeneration is often accompanied by a general lack of tone. The greatest difficulty I have encountered is to get these people in time to do anything with them, and even after they consult a physician they sometimes object to having anything done for them.

Dr. Franklin E. Murphy, Kansas City: It appears that there are certain penalties to be paid for advanced civilization and myocardial degeneration is one of the penalties an increasing number pay. As we are inclined to estimate a man by his business success every man struggles for its attainment, and many men from the strenuous life are prone to suffer from diseased blood vessels.

I am sure Dr. Zwart is right. Optimism should prevail. The patient should be reassured and be made tranquil. Any emotional disturbance will damage the diseased heart. The patient with heart disease has digestive disturbance and the disordered stomach aggravates directly and indirectly the condition of the heart. Dr. Zwart has stated that the disturbance of function of any organ concerned in body metabolism may give autointoxication. The thyroid is doubtless an organ concerned in body metabolism and in diseases of this gland we observe most pronounced symptoms of disturbed metabolism and symptoms of circulatory disturbance. It has been shown that the continued use of tobacco will result in not only functional disturbance of the heart but in organic changes in the heart. As to the influence of alcohol in the production of arteriosclerosis, I recall the report of Dr. Cabot, who has satisfied himself that alcohol alone does not nearly play the part in arteriosclerosis we have thought; tobacco on the other hand plays a much more important part.

Dr. Zwart, in closing: It goes without saying that if we do not see our patients in the incipiency of the disease we do not give them prophylactic treatment. But how many of us watch our patients long enough after typhoid fever, as an example, to be sure that no myocardial degeneration has set up? Of course the individual must be treated, for there is no hope of improving the heart's muscle without the general improvement of the patient. The patient must think happily and live happily if he hopes for improvement. In our instructions we must differentiate minutely between exercise and violence, for violence is potent for harm.

THE ROENTGEN RAY AS AN AID TO THE DIAGNOSIS OF TUBERCULOSIS OF THE LUNGS, WITH DEMONSTRATION OF SKIAGRAMS AND NEW ORTHODIASCOPE.*

By William Engelbach, M. D., and R. D. Carman, M. D., of Saint Louis, Missouri.

The value of the Roentgen ray as an aid to the diagnosis of pulmonary tuberculosis is not generally recognized. In fact, it has only been during the last few years that the rapid development of technical roentgenology has made its application of practical value in the diagnosis of tubercular and other pulmonary diseases.

Outside of the organs contained in the mediastinum, the normally air-filled lung and vacuum pleura are very pervious to these rays, and therefore gives a shadowless skiagraph. Tuberculosis, as well as other diseases of the lung, causes more or less structural change either increasing or decreasing the air-contents of the lung, thereby producing a variation of the normal density of these tissues. The gradual perfection of technique enables the expert roentgenologist to show an exquisitely fine differentiation of approximated tissues varying even to the slightest degree in density. These lesions, therefore, causing sufficient variation in density from the normal, can now be demonstrated by the skiagraph and fluoroscopic screen. Whether roentgenology can give a positive interpretation of the etiology and the pathology of those lesions which it is able to define and locate is yet an open question. That tubercular shadows have more or less definite characteristics, however, will be demonstrated later. Besides these shadow findings, skiagraphy is able to demonstrate very accurately any abnormality in the movement of the chest and in the change in the shape, size and position of its organs. This evidence in itself has only an indirect bearing upon the diagnosis of tuberculosis, and is helpful as a secondary sign indicating some primary tubercular lesion which in itself may not be demonstrable with the x rays.

The importance of the proper interpretation of the x ray findings in these conditions is of necessity absolutely essential. The technique must be expert and obtained with the most improved modern equipment; for instance, the picture must be made in the shortest possible time, i. e., one to five seconds, etc. These skiagrams, perhaps more than any other, require years of experience and close application of controlled diagnosis for their proper interpretation.

In giving the following summary of this application of skiagraphy, with the demonstration of skiagrams of these conditions we make no claim for originality, but merely attempt to select from the works of Holzknecht, Shoenberg, Kassabian, Rosenthal, Hickey, Willey, and others,

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

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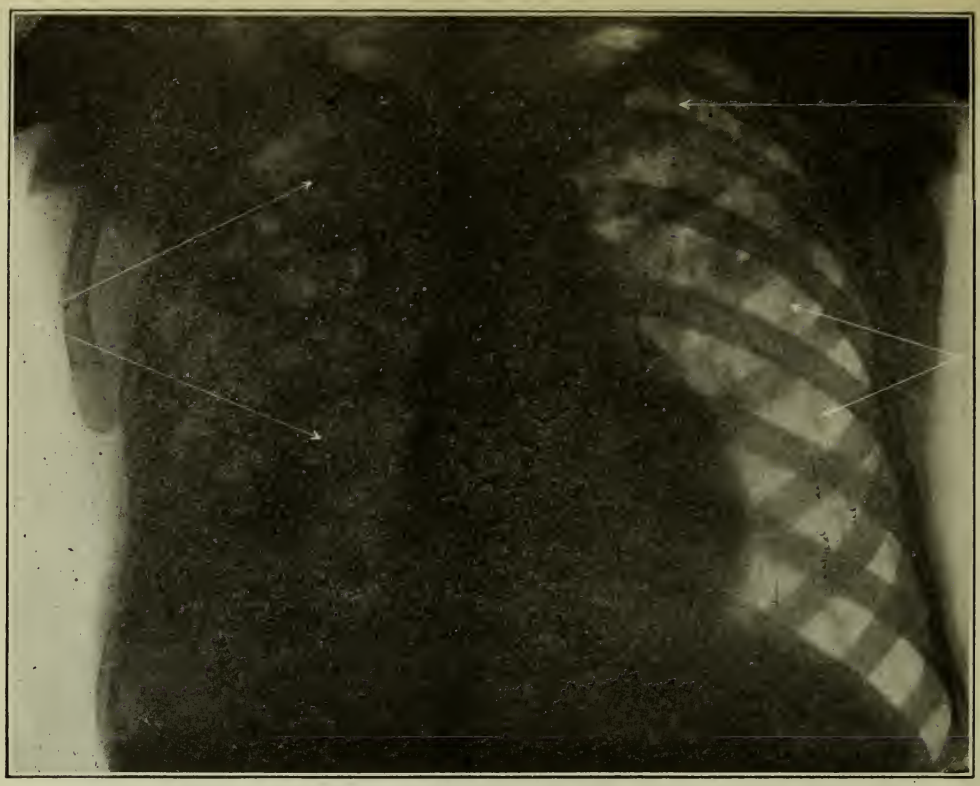

Bilateral infiltration second stage tuberculosis.
(Radiograph by Vernon J. Willey.)

1. Entire right lung, diffuse infiltration. 2. Infiltration of the entire left upper. 3. Early infiltration.

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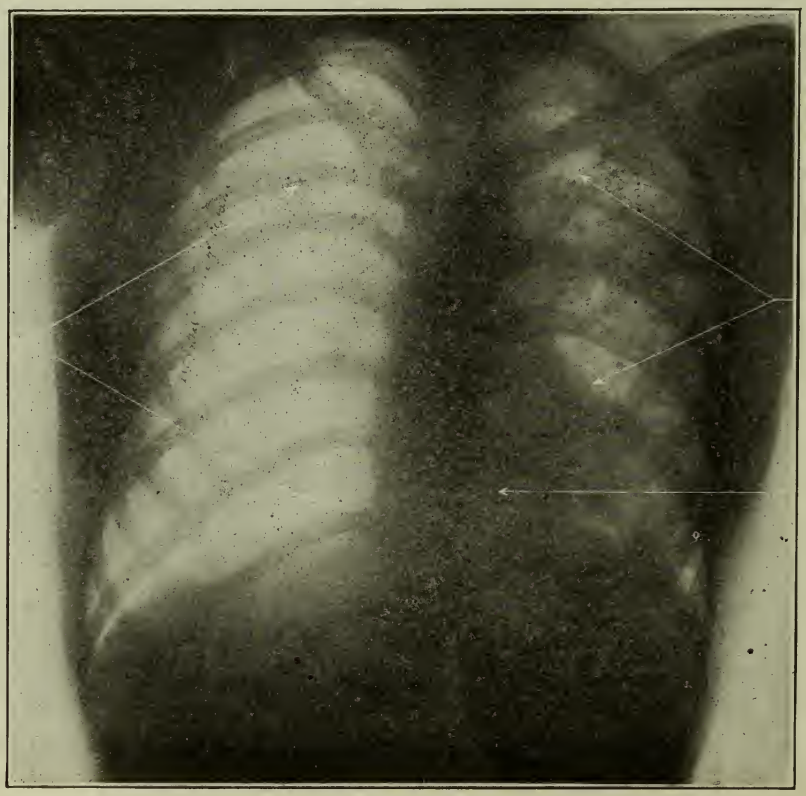


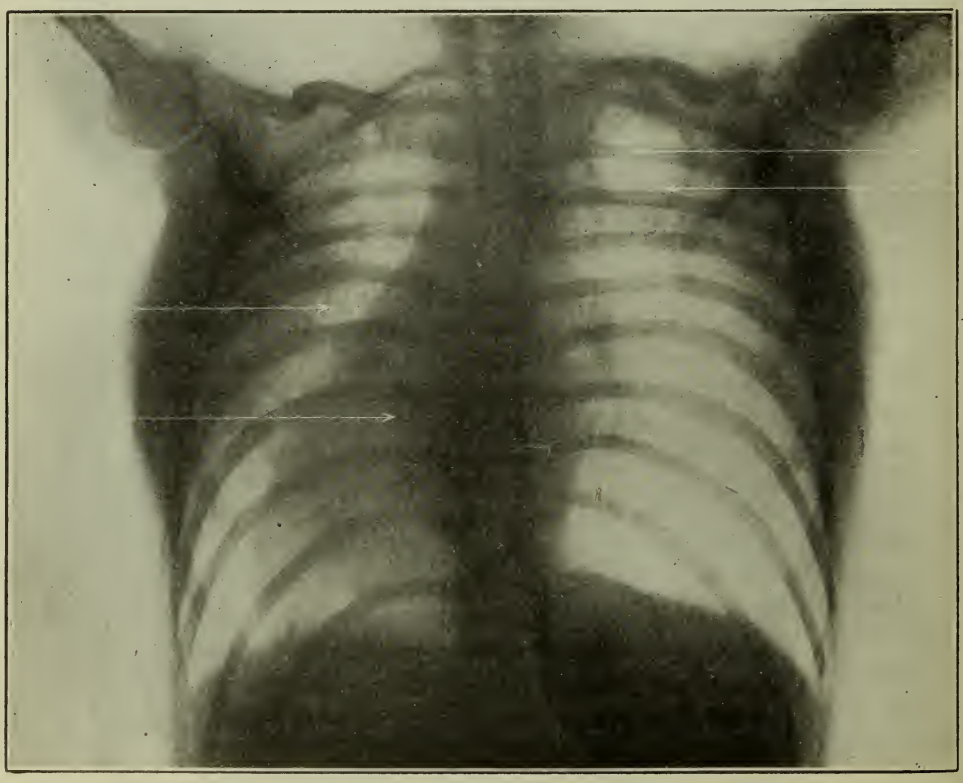
Second stage tuberculosis. (Radiograph by Vernon J. Willey.)

1. Pneumothorax with depression of diaphragm and displacement of heart to the left. 2. Diffuse infiltration of entire left lung. 3. Heart shadow indefinite on account of infiltration in the left lung.

some of the important principles of their art which are of practical value at least as confirmatory evidence in the diagnosis of tubercular conditions. In this summary the findings of fluoroscopy, skiagraphy and orthodiagraphy will be given without special mention of the technique or methods used.

Tuberculosis of the Pleura. On account of the large percentage of diseases of the pleura being tubercular in origin, and the frequent association of these diseases with pulmonary tuberculosis, they are considered an appropriate part of this article. Abnormal collections of free fluid or air in the chest cavity produce such a marked change in its density as to be very easily observed with the fluoroscopic screen or skiagraph. Pleurisy with effusion, although readily diagnosed by ordinary physical findings, is sometimes, when encapsulated or intra-lobular, difficult to differentiate from plastic pleurisy, lesions of the lung, displacement of abdominal organs, etc. Large effusions also often present the signs of complete consolidation of the lung with or without an obstructed bronchus, and are also frequently mistaken for a diffusely thickened pleura, or vice versa. These conditions are easily differentiated by a simple fluoroscopic examination. The x ray shadow of an effusion of the chest is denser than that produced by any other thoracic condition. This shadow is of an even, diffuse, dense opacity, and has, when the fluid is not too large or encapsulated, the hydrostatic properties of seeking its own level. The rib shadows are less distinct than on the opposite side. When the effusion is at the base of the lung it usually obliterates the shadow of the diaphragm and fuses with the shadow of any adjacent solid organ. The compressed atelectatic lung tissue above the effusion is denser than the corresponding normal lung of the other side. Displacement of the heart shadow takes place more markedly when the fluid is on the left side. This displacement, however, is one of the entire mediastinum with no marked abnormal relationship of the base to the apex of the heart. The movements of the diaphragm are restricted, depending upon the amount of the fluid. In contrast with these skiagraphic findings a thickened pleura produces a shadow of only a very slight veiling of the effected side, depending upon the extent of the lesion. This shadow is irregular in outline, very unequal in opacity, and without the slightest mobility. The ribs are closer together, the pleural cavity is decreased in size, and curvature of the spine and decreased movement is usually present in old contracture. Empyema gives findings very similar to pleurisy with effusion. There is usually more marked displacement of organs, and sometimes diffuse undulations or pulsations are observed with the fluoroscope. Kassabian says the shadow is the same as that of effusion except when edema of the chest wall accompanies the empyema which increases the opacity. It is, therefore, questionable whether differential diagnosis can be made between the pleurisy with effusion (serous, serofibrinous or hemorrhagic) empyema, hydrothorax, hemothorax, etc. In intra-lobular empyema, a

Small cavity in the base of the right upper lobe.
1. Cavity partly filled. 2. Cavity wall.

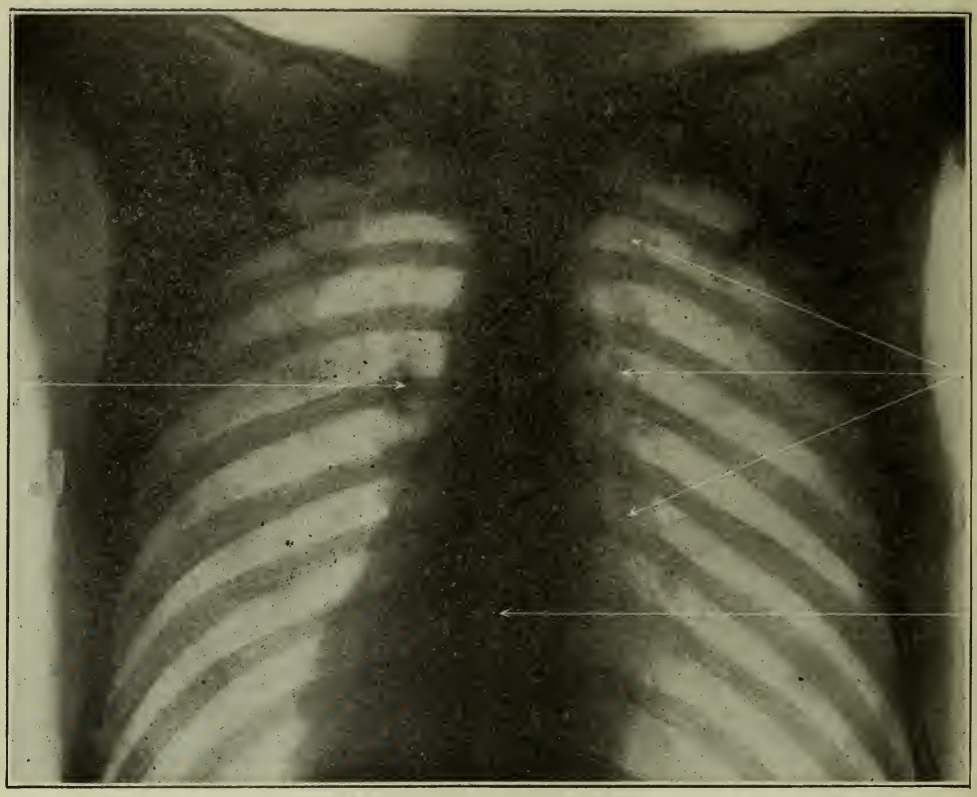


Cavity in the right upper apex.
1. Empty cavity. 2. Cavity wall. 3. Heart shadow. 4. Beginning infiltration.

localized shadow corresponding to the intra-lobular fissure is presented. Differentiation of this condition from encysted empyema, cavity or abscess of the lung, is sometimes difficult by the skiagraph alone. There is no marked displacement of organs in the localized empyema, and it is rarely surrounded by a darker margin as is abscess or cavity of the lung. Diaphragmatic pleurisy produces a localized shadow at the base of the lung which obliterates that of the diaphragm, and consequently diaphragmatic movement is almost completely restricted. Subphrenic abscess causes a displacement upward of a motionless diaphragm, and usually some displacement of the heart, with the adjacent lung tissue above the diaphragm darker than normal. Sometimes the upper level of the shadow below the diaphragm is mobile on shaking the patient.

In pneumothorax the majority of cases of which are tubercular the skiagraph is a perfectly clear space of an enlarged half of the chest showing only the ribs in marked contrast with a light shadow caused by the air within the pleural cavity. In the upper internal angle of the affected side there is a shadow darker than the corresponding lung of the opposite side, which is cast by the retracted collapsed lung. The diaphragm is in a low position, its movements are greatly restricted or absent, and the mediastinum is usually displaced towards the non-affected side. The heart is usually markedly displaced and produces a very clear cut dark shadow on account of the contrast of the air-filled pleura. In hydro- and pyo-pneumothorax there are three different shadows on the effected side. The collapsed lung is shown by the upper internal shadow of a dark, hazy nature, sometimes containing a more solid dark tubercular area. Beneath this is a bright space produced by free air in the pleural cavity, and at the base of the thorax there is a dark uniform fluid shadow having hydrostatic properties and sometimes pulsating. Movements of the diaphragm are usually obliterated, and the displacement of organs is the same as observed in pneumothorax.

Tuberculosis of the Lungs. Second and third stages of tuberculosis of the lung produce very positive skiagrams. Cavities are usually very easily diagnosticated. An empty cavity produces a lighter area surrounded by a dark margin. Filled cavities give the same findings as consolidated areas, that of an irregular dark shadow. This dark area, however, usually becomes lighter after the patient is induced to empty the cavity by coughing, change of position, etc. This latter change of opacity differentiates it from an infiltration of the lung, tumors, cysts, encapsulated empyema, etc. A dilated bronchus surrounded by an infiltrated margin is frequently impossible to differentiate from a cavity, although its shape, form and number is a help in drawing conclusions. The findings in gangrene and abscess are practically the same as those of cavities, but are easily differentiated by the other methods. The x ray findings in these conditions producing cavity formation are of importance on account of accurately demonstrating their size, number and location.

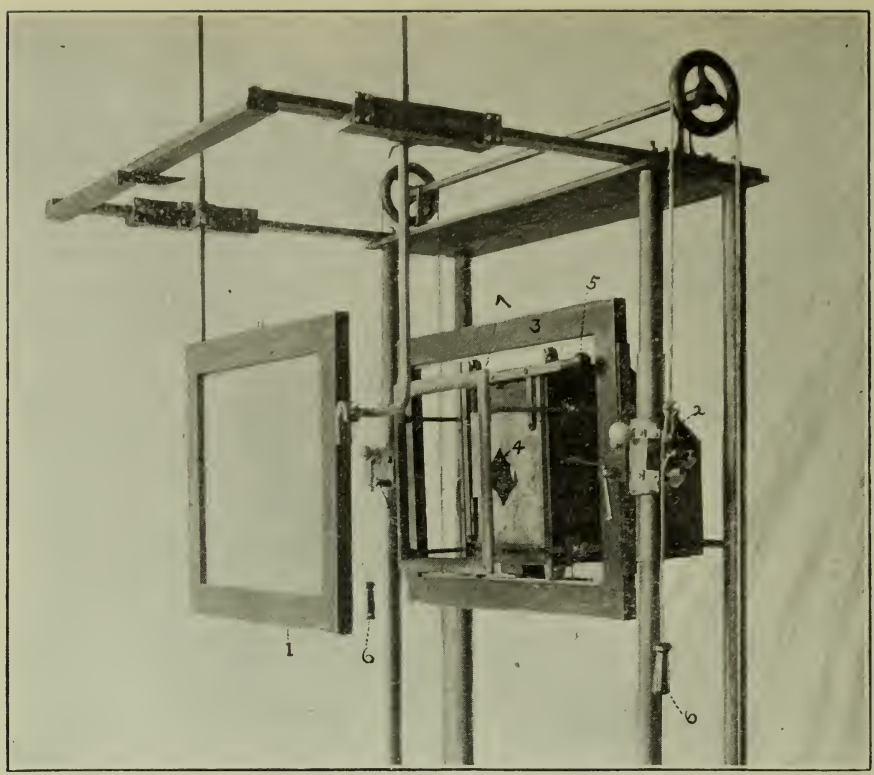


Tubercular (?) lymphadenitis. Lungs normal.
1. Calcified lymph gland. 2. Parabronchial thickening. 3. Heart shadow.

Aneurysm.
1. Normal lung tissue. 2. Aneurysm of the descending thoracic aorta.
3. Arch of the aorta. 4. Heart shadow.

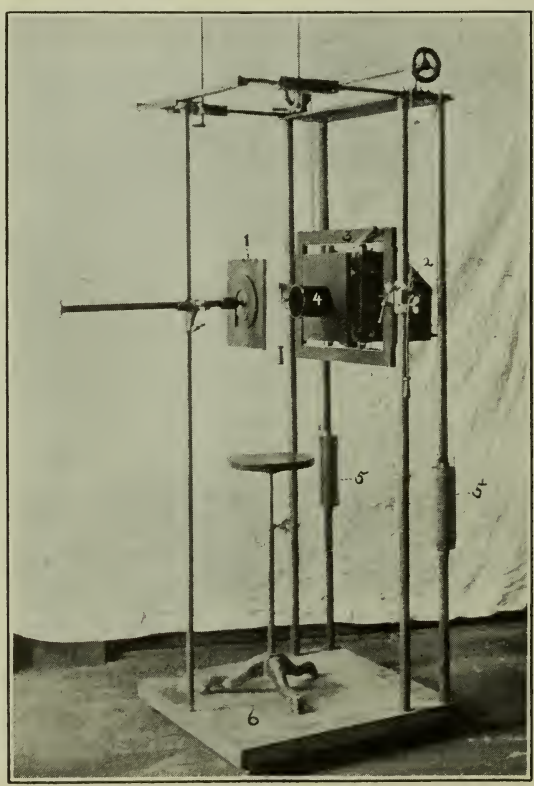
Second stage tuberculosis consisting of infiltration or consolidation with or without beginning cavity formation is also very easily diagnosticated by this means. The shadows produced by these lesions are more or less diffuse shadows having a marked variation in opacity, depending upon the amount and density of the lung tissue involved. They are characterized by their non-uniform opacity. In contrast with the shadow produced by consolidation of pneumonia, which is a lobar, uniform homogeneous shadow, these shadows vary considerably, presenting a more or less unequal, spotted appearance within a lighter shadow. They are usually located at the apices, not limited to a lobe, non-mobile in character, remain constant after expectoration, change of position, etc., are not as densely dark as a fluid shadow, but are much deeper in color than that of an adhesive pleurisy. They are differentiated from infarcts by being more irregular in density and shape, and not located at the periphery of the lung. They differ from atelectetic areas by not disappearing after coughing and forcible breathing. Other conditions such as tumors, cysts, echinococcus, actinomycosis, and blastomycetis of the lung produce circumscribed areas varying in opacity, which are difficult to differentiate from tubercular shadows by the skiagram alone. Malignant growths frequently pulsate in one direction, which is exceptional with tubercular consolidation. Aneurysms are easily differentiated by the expansile pulsation in more than one direction. We have found that in this stage of tuberculosis the x rays have given a more accurate diagnosis of the extent of the lesion than physical examination.

First Stage Tuberculosis. The earliest tubercular shadows demonstrable by the x rays are small, hazy, darkened spots, depending for their distribution upon the extent of the lesion. Multiple lesions show a mottled appearance of the affected lung. In comparing the physical with the radioscopic findings of incipient tuberculosis (cases upon which no positive findings could be demonstrated), Dr. Carman and myself have found the skiagrams very helpful. We believe in the very earliest cases that it is impossible to make a positive diagnosis upon the skiagraphic findings alone, but the characteristic x ray findings taken with the suspect physical and clinical findings warrant a positive diagnosis in a majority of these incipient cases. The non-tubercular conditions which might possibly produce either suspect, physical, clinical or x ray findings are usually excluded by a combination of these findings. Other conditions which usually give confusing x ray pictures simulating incipient tuberculosis are interstitial pneumonitis, beginning bronchiectasis, atelectasis and anthrychosis. The normal thorax usually gives a chain of small shadows along each side of the sternum which are produced by para-bronchial glands, bronchi and blood-vessels. These shadows are frequently mistaken for tubercular shadows in the lungs. From these shadows there frequently radiate streaked, fading lighter opacities, which have been considered the findings of para-bronchial pleural



New Orthodiascope.

1. Fluorescent screen mounted with lead glass. 2. Opaque box. 3. Supporting frame. 4. Adjustable shutter. 5. Handle to shutter. 6. For moving box laterally. 7. Compression frame.



New Orthodiascope.

1. Plate holder. 2. Opaque box for x ray tube. 3. Supporting frame. 4. Compression diaphragm cylinder. 5. Counter-weights. 6. Base.

thickening. Enlargement of these glands produces a distinct fusing of these normal shadows causing an irregular more or less opaque shadow in this location. Calcified tubercular lesions usually cast very sharp, small shadows which are difficult to differentiate, however, from anthrocotic particles in the lymph glands and lungs. We have not found the vertical position of a small heart a very constant or helpful sign as an indication of incipient tuberculosis. William's diaphragm phenomenon, *i. e.,* the restriction of the movements of the diaphragm on the affected side, has been disqualified by a number of investigators as of any value in the diagnosis of incipient tuberculosis. They have demonstrated that this phenomenon was not present in the majority of positive tubercular cases.

Conclusions. The x ray examination is a very valuable adjunct to the diagnosis of tuberculosis of the lungs for the following reasons:

(1) Many of the indefinite anatomical conditions of the pleura are easily demonstrated positively.

(2) The lesions of third stage tuberculosis (infiltrations and cavities) are diagnosticated positively as to size, number and location.

(3) The extent of known tubercular lesions of the second stage (infiltration and beginning lesions) are demonstrated more accurately than by physical findings alone.

(4) Combined with the clinical and physical findings it affords valuable evidence in the diagnosis of a majority of the cases of incipient tuberculosis.

THE PASSING OF AN OLD THERAPY.*

BY OSCAR L. PEAK, M. D., SPRINGFIELD, MO.

No profession has a nobler work before it than that of the doctor. Men of no other calling have better opportunities to do good to all the people than all the doctors.

They hold the closest confidence of their patrons and can exert influence for good or evil as they choose; and they do unconsciously exert it according to the predominence of one or the other of these qualities in their own minds. "As a man thinketh, so is he."

Some physician is the first to direct the care of the first-born in nearly every home, and his counsel and instructions to the trusting young mother at that time will enter largely into the shaping of the character of all the children born into that home.

How important then that we weigh well every word and action, that we may start them rightly; in short, that we may have a conscience and obey it. We do not need to lecture them or be needlessly officious in their family affairs, but simply direct our great influence to the end of uplifting humanity, and making Christian purity and protection possible. Children grow up to look on the family doctor as a model man, and their confidential friend. Hence, a word of advice or a timely suggestion from him nearly always falls into fertile soil; and we should not permit these to be lost opportunities to be charged up against us.

One of our most frequently misused opportunities is in the dangerous attitude which the majority of us have taken in regard to the use of alcoholic stimulants. I believe that it is wrong for us to use or consent to the use of it in any form, lest in trying to do good we do our patient and his family an everlasting injury.

There is, unquestionably, no doubt that thousands of persons have been started in the downward course of the drunkard by the direct act, advice or sanction (and I am ashamed to say too often by the example) of their family physician.

Many and many a victim of alcoholism can give a testimony similar to the following quoted one. "I never drank in my life until after it was given me during sickness as a medicine. I have felt the need of it continually since."

Ninety per cent of such cases, started by the doctor, ultimately become excessive drinkers. The weakened physical condition during sickness finds the person doubly susceptible to the effects of alcohol and leaves in him an increasing desire for it, with a decreasing will

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

power with which to resist it. Thus unintentionally the die is cast by the doctor for his patient's ultimate ruin. He has converted an acute disease into another chronic one.

Many a loving mother has started her children to the ditch by giving them their first taste of whiskey on the sanction of the good old doctor, while perhaps both the mother and the doctor were personally total abstainers, but were laboring under the delusion that whiskey was necessary. The widespread prevalence of this pernicious fallacy has become truly alarming.

Even since I began writing this paper the mother of a four-days-old baby boy said to me, "Doctor, don't you think it would be good for the baby to give it a little sweetened water with a few drops of whiskey in it?" I replied, "No, sister, he will learn *that* soon enough." In further conversation she told me that all of her children (four of them boys) were just crazy for whiskey, while neither she nor her husband cared much for it. She acknowledged, too, that she gave whiskey to all of her babies.

Unfortunate indeed is the man or woman whose dear mother has planted in him or her a desire for strong drink.

It is a fact, too, that many good people keep a bottle of whiskey in their homes, and the most frequent use of it is to make a little toddy for the children for every little indisposition.

Gentlemen, it is plainly our duty as custodians of the welfare of the people, not only to advise against, but actually to enter our protest on such practices, so that the blame may no longer be laid at the door of our noble profession. I believe common law puts it that when a man condones or consents to a wrong deed he becomes *particeps criminis*. The people have a right to expect their medical adviser to warn them against all that is injurious to them.

Looking at it from a business standpoint, the liquor traffic is distinctly the doctor's enemy. It increases his work and decreases his pay, by absorbing the wages, salary and wealth of his constituents; by breeding disease, crime, poverty and degeneracy which he must take care of, or cowardly dodge the responsibility. I say "responsibility" because I believe that if the great body of physicians in this country, with the great influence they possess, had, as a unit, taught rightly and practiced rightly for the past decade, we might already have had this national evil corrected instead of having to wait another decade.

Alcohol is a functional and tissue poison and is not necessary in our practice; in fact it is to be dreaded and distrusted as one of the seductive, dangerous, habit-forming drugs, with but little excuse for its existence as a remedy.

Admitting for argument's sake that it possesses all the virtue which its adherents claim for it, you only have to look about you for abundant proof that it falls far short of recompensing for the evil it

produces. It causes more deaths than it saves lives. No sort of a compromise with such an evil is justifiable.

"There is no disease demanding a remedy where alcohol might be given, in which the materia medica does not furnish something better;" and we can find it by searching for it.

As an antidote for carbolic acid poisoning it has a commendable virtue; but the number of persons who are burned to death or maimed by carbolic acid becomes infinitesimal as compared with the number maimed or burned to death by the antidote.

Twenty years ago I commenced using milk instead of brandy in my fevers, and my deaths have become fewer and my fevers of shorter duration. Pneumonia especially subsides more quickly and perfectly without alcohol. Within the past year I had a bad case of pneumonia in an inebriate. I treated him without alcoholic stimulants of any kind and he made a perfect recovery within three weeks. Less than two months ago I had a case of pneumonia in the person of an emaciated old lady 71 years old and she made a good recovery without alcoholics.

The typhoid cases go through more smoothly, with less dilirium, and come out stronger without it than with it.

Our up-to-date pharmacists are already anticipating the trend of things and are providing nearly all, if not quite all, necessary remedies for our use, without even alcohol as a preservative.

I will quote to you a few opinions of some of our highest medical authorities on this subject.

Dr. Geo. M. Gould, formerly editor of American Medicine, says: "The majority of physicians do not now prescribe alcoholic liquors."

Dr. Nathan S. Davis, deceased, former Dean of Northwest University Medical College, Chicago, said: "I have found no case of disease and no emergency arising from accident that I could not treat *more* successfully without any form of fermented or distilled liquors than with. For the past 54 years I have not found it necessary to prescribe alcoholic liquors."

Dr. J. M. Aiken, lecturer on nervous and mental diseases in Omaha Medical College, said in a lecture to students: "The use of alcohol as a beverage or therapeutically, is in either case a habit of the user. The stimulation is but temporary, the reaction leaving the nerve cells of the individual with less resisting power than before the ingestion of alcohol. Never permit a verbal or written prescription of yours to give rise to the use of a habit-forming drug."

Sir Benjamin Ward Richardson, M. D., an eminent student of alcohol, said that he believed a brain once stupefied by alcohol could never again be quite equal to what it was before.

Prof. Max Kassowitz of Vienna, Austria, asserts that the dogma concerning the nourishing and strengthening character of alcohol is one of the fatal errors of science; and he earnestly protests against permitting children under any circumstances, sick or well, to receive alcoholic drinks.

Dr. Boynton, Clifton Springs, N. Y., says: "The best class of thinkers, men of the best intellectual gauge, are those who are doing away with this miserable, unscientific practice of giving liquor." Now if we Missouri doctors are on this plane it applies to us.

Prof. Frank Woodbury, Philadelphia, Pa., says: "In its relation to the human system, alcohol is never constructive and always destructive."

Dr. C. H. Hughes, St. Louis, Mo., in speaking of alcohol, said: "It is an old and sly offender and very much the mocker in medical practice that it has been pronounced in holy writ. It exhausts the latent energy of the organism often when that power is most needed to conserve the failing strength of the body in the battle with disease. I never prescribe it to be taken as a beverage, nor at the patient's discretion, nor any sort of bitters. Strong constitutions are needed to counteract the toxic effect of alcoholic liquors."

I might give many more testimonials from sources equally as good, some of them more elaborate and just as strong; but when these eminent doctors—the teachers of doctors—make such strong and unqualified statements against the use of *any drug* it is time for us to quit it, in fact, I think it is criminal in this instance for us not to quit it.

No better evidence could be afforded of the inutility of the drug; and with the growing diffusion of knowledge it is destined soon to be classed with the obsolete drugs.

Without giving the exact details or data of results, I will simply give you the names of some of the institutions for the care of the sick, that have made a bedside test of the comparative value of the use and non-use of alcoholics with their patients. These have given out the figures, which show a marked decrease in the mortality in favor of their non-use in all diseases.

The West Haven Infectious Diseases Hospital, London.

The Liverpool Fever Hospital.

Mercy Hospital, Chicago.

Battle Creek Sanitarium, Michigan.

Nordrach Ranch Sanitarium, Colorado Springs.

Bellevue Hospital, New York.

The Pottenger Sanitarium for Diseases of the Throat and Lungs, Monrovia, Calif.

National Jewish Hospital for Consumptives, at Denver.

It has not been many years since the favorite prescription for consumptives was whiskey—and they nearly all died. At present milk and raw eggs, fresh air and exercise is the favorite treatment and it is pronounced curative. The consumptive experts are almost a unit in shutting off alcoholics.

One of them, Dr. Jno. E. White, of Colorado Springs, says: "Whiskey and liquors in any form, are absolutely poisonous to the consumptive; and that trying to cure consumption with whiskey is like trying to put out a fire with kerosene."

Another expert, Dr. Legrain, of Paris, France, says: "Alcohol predisposes the individual to tuberculosis. * * * And to conquer alcoholism is to conquer tuberculosis."

An eminent French scientist and member of the Academy of Medicine has made the statement that the abuse of spirituous liquors is responsible for a new form of tuberculosis, which in the case of a hard drinker develops at the top of the right lung toward the back, whereas ordinary cases develop first at the top of the left lung, toward the front. This high authority further declares "that any hope of preventing the spread of tuberculosis is futile until the spread of alcoholism is checked."

Our anti-tuberculosis societies would be getting down among the roots if they were bending the larger share of their efforts towards stamping out the liquor traffic.

In October, 1905, the following resolution was adopted by the International Congress on Tuberculosis, held in Paris, about 2000 medical scientists being present:

"Resolved that, in view of the close connection between alcoholism and tuberculosis, this Congress strongly emphasizes the importance of combining the fight against tuberculosis with the struggle against alcoholism."

I am conscious of the fact that some may denounce these as but the outcroppings of fanatical brains; but remember that it is apparently a universal law, though mysterious, that man is powerless to produce any great revolution, permanently good, unless he pays, with suffering or death, for the triumph of his dreams. Hence, how few there are who can get their own consent to run the gauntlet.

However, the above quoted opinions and comparative clinical results are not sentimental fancies but stubborn facts, evolved from scientific experiments and observations, by learned, unbiased minds, purely for the benefit of their patients and given out for the benefit of mankind. They stand out clearly away above all prejudice and the fog of the fogy notions of old theorists.

If physicians who still believe they need alcohol would study up the subject and forsake the old beaten path for a few months, and treat their patients along non-alcoholic lines, it would be a decided revelation to them, as well as a satisfaction to him who wishes to do the very best for his charge.

Have you not noticed, too, that medical literature against alcohol is increasing and that recent writings defending its use are almost nil?

Gentlemen, we will not have done our full duty if we neglect to correct those nursing mothers who think it necessary to drink beer, ale or wine to furnish sustenance for their babes. It is true that these do stimulate the glands to a little greater secretion; but it is not the good nourishing milk that good food, pure water and fresh air produces. It is a sort of swill milk which nearly always creates in the child an abnormal desire for strong drink; while the mother has contracted a permanent drink habit.

Statistics show that the increase in drinking and drunkenness among women has already assumed proportions that threaten the foundations of our commonwealth. A vigorous protest should also be made by us against the many seductive whiskey patent medicines, which so often insidiously make drunkards of the unsuspecting.

Although I have always been a total abstainer, I prescribed alcoholic stimulants in my practice when I began, because I was taught to do so, and believed it a necessary medicine. I was first lead to observe that it was not needed by an occasional patient—crank—protesting on its use, saying that they would take their own chances without it, as they preferred to die sober. Experience proved that they did not need it, and others were given the same chances until finally the scales fell from my eyes and I cut it *all* out.

Believing that every right-minded physician does not wish to betray the great confidence reposed in him as the family medical adviser, or use his great influence wrongly; and believing that every physician should, and really does desire to live up to the full measure of his ability for good, I urge the abolition of alcohol from his materia medica as one of his greatest opportunities.

Thus we may very materially assist in the passing of this needless old therapy.

A New York Druggist was fined because his clerk sold and recommended a medicine which failed to accomplish what was promised. The appellate division of the Supreme Court of New York State upholds the decision. Of course, this is not necessarily law for other states but it does mean that it is wise for druggists to be careful about recommending or endorsing medicines sold over the counter. Let the customer assume the responsibility. The government contends that the word, "cure," should not be used on patent medicine labels and now it seems that it should be used only with caution when conversing with a customer.—(*Meyer Bros., Druggist.*)

TRAUMATIC NEUROSIS, OR RAILWAY SPINE.*

BY C. R. DUDLEY, M. D., HANNIBAL, MO.

The term "Traumatic Neurasthenia" is sometimes applied to the varied nerve symptom-complex that makes its appearance in many cases following a traumatism, or a sudden exposure to the possibility of a severe traumatism and where life is endangered, but it is inadequate to define completely the morbid process encountered. The condition resulting from such an accident or exposure is a neurosis, physical or psychical in origin, which may present the symptoms of neurasthenia, of hysteria or of both.

To these symptoms, often ill-defined, were first given the name of "Railway Spine" by Erichsen, in whose opinion they resulted from an inflammation of the cord and its coverings following injury, a view long since discarded.

Owing to the greater frequency and the wide-spread distribution of the causative agencies, this condition is most frequently found resulting from railway accidents, but may follow mine explosions, falls from an elevator, ladder, house or other elevated object, or may result from traumatisms received in runaway accidents, etc. In all of these accidents an injury may have been received, or only a shock or concussion in which the body may not apparently have suffered. The symptoms of a traumatic neurosis may likewise follow a deep mental impression, or a severe mental strain associated with bodily exposure. By far the greater number, however, result from steam or electric railway accidents, and whether or not the vulnerability, to suits for damages, of the corporations owning the railways is a predisposing factor to the development of nervous manifestations following an accident, the fact remains that in a certain proportion of such cases the condition is a morbid entity and not an act of malingering.

Traumatic neurastbenia usually makes its appearance after the immediate effects of the accident subside, the patient tires easily and quickly, suffers from pains and aches in various parts of the body, headache, backache, limbache, muscular fatigue, muscular exhaustion with paresthesia and numbness in the extremities, to such an extent that it prevents the patient from following his customary and usual avocation. So marked are the symptoms of fatigue in these cases that the condition has been termed the "fatigue neurosis." The patient usually complains of loss of appetitie, dyspepsia, constipation, inability to sleep, loss of memory, cardiac depression, and mental depression or mental confusion. The reflexes are usually exaggerated, but are not as persistent

*Read before the Ralls County Medical Society, July 9, 1908.

as those of organic disease of the cord, though as an associated condition we may have a certain amount of muscular rigidity and tenderness along the spine with hyperesthesia.

Traumatic neurasthenia may develop in anyone, while traumatic hysteria appears only in those of an inherited neurotic predisposition, and here the accident is only the exciting cause. Many of the conditions diagnosed as "railway spine" are in reality cases of traumatic hysteria. Traumatic hysteria and traumatic neurasthenia may be present together in the same patient. Da Costa states that neurasthenia is a condition of exhaustion associated with a number of chronic disorders, that it forms a foundation on which hysteria may develop. Hysteria is made up of a morbid impressionability, hyperesthesia of the nerve centers, lowered self control and an increased sensitiveness of the peripheral terminations of the nervous system. The accident plays a double part in producing traumatic hysteria,—first,—by its effects on the mind (psychical traumatism,)—second—by its effects on the body, which concentrates the attention to one point. The site of a traumatism may localize symptoms, and an area of pain or stiffness often serves as an autosuggestion which becomes magnified by the enlarging tendency of an hysterical mind. Charcot early pointed out the fact that a condition of hysteria long latent and unrecognized, may be aroused into activity by a blow or an accident.

In a few instances where death has resulted within a comparatively short time after spinal concussion, punctate hemorrhages in the brain and cord have been found on post mortem examination. In others, a more or less advanced arteriosclerosis with degeneration and beginning multiple sclerosis in the white matter, and degeneration of the sympathetic ganglia, have been observed, and in still other cases a general arteriosclerosis of the circulatory system. In the majority of the cases examined post mortem, however, no demonstrable lesions were found.

The symptoms of hysteria of traumatic origin differ but little from those produced by other causes, save those referable directly to the location of the injury. The absence of spasm, paralysis, hyperesthesia, paresthesia, or anesthesia at a distance from the site of the injury, excludes a meningo-myelitis. If a pain that has lasted for months is not increased by downward pressure on the head or shoulders, and there is movability of the vertebra with no angular displacement, caries of the vertebral bones can be excluded. According to Pearce Gould, when there are wasted muscles and when moderate movements of the spine are painless but the effort to bring the body to an erect position causes pain in the erector spinæ region, the trouble is a strain of the erector spinæ muscle. If the muscle is not wasted and the pain is in bending forward rather than in straightening up, the vertebral ligaments are the seat of the trouble.

The severity of the symptoms and the intractibility of traumatic neurasthenia or hysteria to treatment is often markedly influenced by an existing suit for damages against the "soulless and grasping corpora-

tion" which happens to be the defendant. Such coexisting complications often make a correct diagnosis of the presence and extent of the morbid condition, one of marked difficulty and one which taxes the skill and the diagnostic ability of the surgeon to its fullest extent to decide between the real and the simulated. Frequently does the surgeon observe a patient, who, outwardly, is an incurable nervous wreck, bloom like a new flower with health and vigor, shortly after having received, as a healing salve for his injuries, a favorable judgement for a goodly sum of money. With such an incentive it is not astonishing that malingering becomes almost a fine art, and to detect the fraud, close watchfulness, rigid scrutiny, and a most thorough physical examination are necessary. A malingerer will always exaggerate his symptoms, and particularly those of pain and tenderness over the spine and the site of the supposed injury. His reflexes are increased out of proportion to those in actual diseased conditions, and are retarded. Close observance of the patient's behavior and movements when his attention is diverted from his disease, when his vigilance is relaxed, will reveal to the surgeon the true situation in a professedly morbid condition. Drunken with ether, in the early stage of anesthesia with this agent, and cut off from the dominating influence of the will, a pretended paralytic suddenly regains the power and strength of robust manhood, and the erstwhile morbid affection vanishes like mist before the morning sun.

The function of the surgeon acting either as the medical attendant to the patient or as the representative of the defending company or corporation, consists in determining—first—the existence of actual disease, second, its character, whether simple neurasthenia, severe hysteria or an organic lesion. The outlook for recovery is good except in cases that present the more serious symptoms (Osler). It must be remembered, however, that a bona fide traumatic neurosis is one of the most intractable conditions that we are called upon to treat and, with the exception of such surgical measures as enforced rest of the injured and painful parts by immobilization with plaster or other means, the treatment is that of neurasthenia in general.

HIP JOINT DISEASE.*

BY G. B. SCHULZ, M. D., CAPE GIRARDEAU, MO.

Hip joint disease is very much more common in children than in adults. In the former it is generally bony in origin, the tuberculous deposits being in the majority of cases at first in the femoral epiphysis, a region naturally subject to the action of repeated shocks and slight traumatism. In not a few patients the acetabulum is first affected, and primary infection of the soft structures of the articulation is probably by no means so infrequent, even in early life, as is often supposed. By some writers the disease is divided into three stages: First, that of deposition of the bacilli and the early irritation and new formation consequent thereupon; second, that of fully developed arthritis, with its effusion and fungous masses; third, that of breaking down of the infected tissues and greater or less disorganization of the joint, followed by repair, which is usually slowly effected and far from perfect, or by death. It is to be understood that this refers to neglected cases. A natural cure results in one of two ways: by the absorption or calcification of the tuberculous tissue at an early or late stage of the disease; or by the purulent degeneration of such tissue and its evacuation by an external opening and discharge. But a spontaneous cure is not the natural tendency of the disease in the early stages. The suppuration which comes later seems to be nature's effort to eliminate the diseased material, and it is the common method by which spontaneous cure results when it does occur. This late stage of the disease is not likely to have resulted until malposition and shortening of the limb have come on and much impairment of the general condition has resulted. It is this state of affairs that makes the spontaneous cure of hip joint disease unlikely and imperfect. When a spontaneous cure does occur it is almost invariably with an ankylosed joint. The articular surfaces have been destroyed by the disease and being melted into pus have been carried away and in part of the joint at least, eroded and hyperemic bone surfaces are in contact, and motion between these would be impossible. At first, these are connected together by the organized granulation tissue, which solidifies into tough fibrous tissue, which in turn becomes the seat of the deposit of lime salts, and a solid mass of bone exists where once there was a joint. In these cases, however, at autopsy an included cheesy mass which still presents some signs of activity, is found. It is to these foci that one looks for an explanation of the late relapses of the disease and the very great harm which is sometimes done by forcible manipulation of these joints and consequent relighting of the original tuberculous disease.

*Read before Cape Girardeau County Medical Society.

Symptoms. The earliest manifestations of tuberculous disease of the hip are an indisposition of the child to run and play as usual, a slight lameness or stiffness of one leg, particularly observed on first getting about in the morning, and perhaps some pain. Pain may be absent at any and all stages of the disease, and is not a diagnostic sign for or against the presence of hip disease. It should always be borne in mind that tenderness or sensitiveness at or about the joint may be absent, consequently the absence of the symptoms does not indicate the absence of well pronounced disease. The use of an inflamed joint always increases the pain, so that it is instinctively kept at rest as much as possible. It will be observed that an effort will be made to avoid moving the joint, which causes more pain than the mere bearing of the weight of the body, so that if such a child has occasion to pick up an object from the floor, it will flex the spine, keeping the hip joint more or less fixed, and will avoid squatting. The stiffness is due chiefly to spasm of the muscles about the joint. Lameness is due in part to the same cause, and also in many cases to the pain caused by using the joint. The pain is usually referred to the neighborhood of the knee and the inner and lower aspect of the thigh, in the distribution of the obturator nerve, twigs of which also enter the hip joint, and is only in rare instances felt about the hip. The child may cry out suddenly, awakened from sleep and is apt to be restless and moan during sleep.

Examination at this time will probably show that the child stands much of the time with the weight largely supported on one foot, the diseased limb being slightly advanced. The gluteo-femoral crease on this side will be less prominent than on the other. If the patient is now placed in the recumbent position and the extreme range of the various motions of each hip joint be tested by flexing, extending and rotating the thighs, it will be found that on the well side the movements will be free, while on the other muscular spasm will restrict them, and some resistance will be due to pain. The most prominent muscular spasm at this time is that of the ilio-psoas, which keeps the thigh in constant slight flexion; consequently if the leg of the affected side lies flat on the table, the lumbar spine will be arched forward so that the hand may be passed between the back and the table. In order to have the back flat and straight it will be necessary to raise the limb a definite amount by flexion of the thigh. There may or may not be some swelling observed about the affected joint, depending upon whether there is any synovial effusion or particular thickening. Careful measurements of the circumference of each thigh at similar points may show a little wasting on the affected side. There probably will be a slight elevation of temperature at some time in the 24 hours. If treatment is not instituted the symptoms enumerated gradually become more marked. The limb is used less and less, the lameness becomes pronounced and the pain increases. The body is now largely supported on one limb if the patient stands at all, the gluteo-femoral crease is still further obliterated, the fixation of the joint is almost complete, the flexion is considerably greater, and the thigh

is usually abducted and everted, or more rarely adducted. There will usually be more or less fullness about the joint, and wasting of the affected limb will be marked. The abducted position of the limb will carry the foot away from its fellow, so that walking would be impossible and the limbs would be constantly separated. To overcome this the lumbar spine is curved laterally, this tilts the pelvis up on the sound side and down on the diseased side. Normally the elevation of the pelvis on the sound side would carry the corresponding limb away from the middle line, but it is adducted in order to meet its fellow. The pelvis being tilted as described, the acetabulum of the diseased side is on a lower level than the opposite one, hence the corresponding extremity appears to be longer than the other limb.

Pain at night is especially severe, and the child frequently cries out in sleep or is awakened. During sleep the muscles, which have been in a condition of constant spasm to fix the joint, relax and the limb is allowed to move. The irritation thus caused to the joint structure induces a sudden and forcible contraction of the muscles, bringing the femoral head against the acetabulum, thus causing severe pain. The abducted everted position of the limb is assumed not only because in this position of the thigh the cavity attains its maximum capacity, and hence best accommodates the fluid in the joint and gives the greatest ease, but also because of the presence of the fluid in the joint under tension causes the limb to assume this position without the aid of any other factors. The child's health suffers more or less, as shown by anemia, loss of appetite and weight. There is now a definite fever of an irregular type.

If the case is still neglected, all the conditions become worse. The swelling about the joint increases and distinct fullness or even fluctuation may be felt in front of the joint or about the great trochanter. The disease, having involved the tissues outside the capsule, forms localized tuberculous collections beneath the skin, which in time discharge spontaneously, leaving sinuses, or travel along lines of least resistance and appear in the buttock, beneath or even above Poupart's ligament, and on the inner aspect of the thigh. Occasionally the acetabulum is perforated and an abscess forms in the pelvis. After the capsule has been ruptured the pain becomes less. At this time the limb may assume the position of adduction, the action of the adductors being now unopposed, and the flexion increases. Owing to the pressure of the head of the femur against the acetabulum caused by the contraction of the muscles, the adjacent cartilages become eroded, exposing the bone, which is gradually absorbed or becomes carious. This destruction of cartilage and bone both in the femoral head and acetabulum results in actual shortening of the limb. The atrophy of the limb is now extreme. The general condition of the child becomes worse as the disease progresses, and if pyogenic infection be added to the tuberculous process, as frequently happens through the sinuses, a hectic condition results.

Diagnosis. In the advanced stages of hip disease diagnosis is easily made, but in the beginning it will be recognized only by a careful ex-

amination, the most important part of which is the examination of the joint itself. For this purpose the patient should be supine upon a hard, flat surface, the trunk and lower extremities free from all clothing, the legs placed in a straight line with the body and the feet together. A line drawn from the suprasternal notch through the umbilicus and the symphysis pubis when prolonged, should pass between the two internal maleoli. It should now be observed whether the back is flat and in contact with the table or whether there is a space between the table and the lumbar spine. If the back is flat, are both lower extremities straight and in contact with the table? In the earliest stages of coxalgia one of the most uniform symptoms is the spasm of the ilio-psoas muscle which causes flexion of the thigh. If the thigh is straightened by pressing the knee down to the table, the origin of the psoas will be pulled upon and the lumbar spine arched forward, leaving a space between the back and the table. A line should next be drawn between the two anterior superior spinous processes of ilium. Note whether this is exactly at right angles to the long axis of the body or whether the process is higher on one side than on the other. In the latter case there is either abduction or adduction present. If the limb is abducted, the process on the affected side will be lower than that on the opposite side. The limb should then be carried until the two processes are on the same horizontal plane; this shows the degree of abduction. While the limb is still in this position it should be raised until the lumbar spine is flat upon the table; it will then be in what is called "the line of deformity." The movements of the joint may now be tested by flexion, extending, adducting, abducting and rotating. In coxalgia the range is restricted. Pressure upon the two trochanters, forcing the head against the acetabulum, may cause pain on the affected side. The conditions from which it must be distinguished at this time are, Pott's disease, sacro-iliac disease, disease of the knee joint, perinephric abscess, certain cases of appendicitis, and rheumatism. In Pott's disease there is the same indisposition to run and play, but the child usually places its hands upon its hips when it walks or upon articles of furniture or other supports to take the weight of the trunk partly from the inflamed vertebræ. There may be an angular projection of the spinous process and there will certainly be tenderness over the affected area. If the child has occasion to reach to the floor, it will squat down, but will keep the spine straight and rigid, supporting his shoulders by his hands on his hips. Finally, by examination in the recumbent position, the hip joints will be found to have a full and free range of motion, without causing any pain. Pott's disease, with abscess in the ilio-psoas, causes flexion of the thigh which may strongly suggest hip disease. Sacro-iliac disease produces much the same indisposition to movement as does coxalgia, but the pain and tenderness are localized in the sacro-iliac articulation. The tenderness will be elicited by pressure over the joint and also by pressing the two iliac crests toward each other. There may also be swelling over the affected joint. Again, motion at the hip joint will be found to be normal. The complaint of pain

about the knee joint in coxalgia will usually call attention to this joint, and many patients have been given medicine for rheumatism of the knee without any examination having been made. Perinephric abscess, by irritating the psoas muscle, causes flexion of the thigh which might suggest hip disease, but the similarity ends here; there are no other symptoms in common except that each gives rise to more or less fever and constitutional manifestation. Sometimes an inflamed appendix lies in the ilio-psoas sheath and causes contraction of the latter in the same manner. Perhaps the most common error in the early stages of tuberculous joints is to treat the case as one of rheumatism. It should be remembered that the latter is not common in childhood, while tuberculous bone and joint affections are frequently seen; that rheumatic manifestations are apt to be multiple, while those due to tuberculosis are generally single.

Prognosis. This will depend in a large measure upon how far the disease has advanced when it comes under treatment. In the earliest stages if the proper treatment is instituted its progress will frequently be arrested and a complete recovery with full restoration of function will be obtained. In other cases the disease goes on to abscess formation in spite of everything that can be done. Even in such cases, if the treatment is continued patiently, a good result will be obtained in the majority of instances. In later cases when the deformity is marked and when abscesses have formed, the prospects of securing a good joint are not so good, but with complete rest many of these abscesses heal and comparatively little damage results. If the disease is still further advanced, with extensive destruction of the articular cartilages and even of portions of the femoral head and acetabulum, and if the child's health is seriously undermined, the outlook is not favorable, although in some of the cases healing finally takes place, leaving a shortened limb firmly ankylosed. Prolonged suppuration may result in amyloid changes in the viscera, and the patient's vitality may thus be permanently injured. Until a perfect cure is obtained there is always danger that the tuberculous process may be transferred to other parts by an embolus or that a general miliary tuberculosis may result. The active period of the disease is from two to five years, and the joint should be protected by a suitable splint from one to three years after the recovery appears complete, lest a latent process be excited to renewed activity.

As respects treatment, the earlier it is instituted the sooner and more perfect may the patient be expected to recover. The two ssential indications are rest and extension. The value of rest in all inflammatory conditions, so universally recognized is nowhere of greater importance than in coxitis. Complete rest can be secured only in the recumbent position. The body must be kept obsolutely quiet as well as the limb, otherwise the joint will be moved and the treatment will fail to accomplish one of its most important functions. If the patient be old enough to obey instructions, the ordinary surgical bed, having a firm mattress and an extension apparatus, will be all that is required. For children

who need restraint nothing equals the frame devised by Bradford. This is made of ¼-inch gas pipe joined at the four corners by right-angled joints. It should be slightly longer than the patient, and as wide as the extreme width of the shoulders, it is covered with light canvas or stout drilling, except under the buttocks. The patient is secured by straps, passing over the chest and pelvis. This affords ample means for fixing the patient's body, it is at the same time a litter, upon which the patient may be moved at any time with minimum disturbance to the joint. The traction must be made in the "line of deformity," that is, the limb should be so placed that the lumbar spine rests upon the bed, the two anterior superior iliac spines should be in the same horizontal plane, and the rope from the extension apparatus carried in the direction of the long axis of the limb over a pulley attached to the foot of the bed. The weight to be attached to the rope will vary from about No. 1, for quite young children, to No. 5 in older and stronger subjects. The comfort of the patient is usually the guide to the exact amount. The proper amount of flexion is maintained by placing pillows. The foot of the bed should be slightly raised so that the body of the patient will act as a counter-extending force. It will be found, if the case is doing well, that the deformity can gradually be corrected by progressively lowering the limb without affecting the position of the pelvis. After the limb has become perfectly straight and a fair range of motion made at the joint without moving the pelvis or causing pain, the patient may have some form of mechanical support applied, and then may be able to go about. All of the many appliances have for their immediate object, securing of fixation or traction or a combination of the two. Recognizing the fact that fixation cannot be absolute and that it does not overcome muscular contraction with the resulting injurious pressure between the head of the femur and the acetabulum, the great majority of American surgeons are employing some form of traction splint. In these splints opportunity is afforded for altering their length at will by drawing away the lower sliding rod from the upper, or by acting upon the foot-piece through the aid of a windlass, the counter-force through the perineal bands preventing the body from following. The pressure symptoms are thus relieved or prevented and recovery correspondingly promoted. When the capsule is distended or there is an extra-articular accumulation, aspiration will give great relief. When the so-called abscess is nearing the surface, whether it should be opened or left to itself to undergo absorption, as many times happens, or be spontaneously emptied, will depend upon whether or not it is causing much local distress. If it is, it should be aseptically opened and drained, the after use of iodoform injections being of much service. If it is not, careful attention to the maintenance of quietude is all that will be necessary. As a rule, operative interference should be confined to opening abscesses and sequestra if present. The excision of the hip leaves a shorter and weaker limb than that obtained by the more conservative treatment, and while in successful cases the duration of treatment is lessened, this will rarely compensate for the greater shortening.

THE REMOVAL OF THE LACHRYMAL SAC.*

BY J. H. THOMPSON, M. D., KANSAS CITY.

Very few cases of suppurative dachryocystitis can be cured by any treatment other than the destruction or removal of the lachrymal sac. Some endeavor to destroy the mucous membrane with caustics; others remove entirely the diseased tissues, which is probably the best procedure. There are several ways to do this operation, but perhaps the following, because of its ease and certainty, will appeal to the oculist.

Under complete general anesthesia the lower canaliculus is slit freely into the sac, which is then washed out with a bichloride solution 1-3000. An incision is made through the skin, beginning over the center of the palpebral tendon extending in a curve downwards and outwards ¾ of an inch or more. The knife must not go deeper than is necessary to cut the skin. In persons with a relaxed skin the wound is best made with scissors. This is done to avoid hemorrhage, because such an incision will miss the larger veins and arteries at the side of the nose. When the bleeding is controlled, a No. 5 Bowman probe is passed into the duct and held by an assistant. If the canal is opened the probe may be inserted far enough to stay in place. By the aid of the probe the finger can easily feel the bony edge of the opening of the canal, which should be exposed by blunt dissection. Then there will be no difficulty to find and see the end of the sac. The probe is now withdrawn and the neck of the sac separated from the bone and soft tissue by a strabismus hook, or other convenient instrument. When sufficiently free the lachrymal tissues are grasped by a pair of strong hemostats, and the sac cut across as close to the bony canal as possible. The sac thus held in the jaws of the forceps, is easily pulled down and dissected away, the only difficulty being where the canaliculi enter, which must be cut across with the scissors.

The most important part of this operation is to have the sac grasped firmly by the forceps, because, when the removal of the sac commences the hemorrhage becomes quite free, and unless the sac is well in hand, it may be lost and cannot then be completely removed. This is the reason why many operations are failures.

Usually in chronic disease the walls of the sac are quite thick and tough, sometimes they are thin and the forceps may tear away; should this happen it is very difficult to remove the sac completely. Then it is best to find the interior of the collapsed bag by the aid of a probe passed through the canaliculus and the sac packed with gauze.

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*Read before the Jackson County Medical Society.

There is always some hemorrhage, so it may be necessary to twist one or more small vessels; usually the bleeding is controlled by pressure. It is not wise to pack the wound, because, when the packing is removed the walls will not collapse and the healing may be delayed two weeks. When the dissection is complete and the parts clean, two stitches may secure immediate union; usually the wound opens but heals in several days by second intention.

The operation should be completed by removing, with a small, sharp curette, all the soft tissue within the lachrymal canal; otherwise there is danger that suppuration will continue from that focus.

In case the sac is packed, the packing should remain forty-eight hours; when it is removed it will leave quite a hole, in which can be seen the remnants of the lachrymal tissue; these must be destroyed by the actual cautery and the wound left to nature.

American Medical Administration in Panama Through British Eyes.—It is gratifying to read such a generous appreciation of American state medicine as is contained in an article on "America's Triumph in Panama," by John George Leigh. Mr. Leigh, it will be remembered, contributed articles to the *Lancet* explanatory of the climatic and hygienic problems facing the United States administration in the inaugural stages of work on the Isthmian Canal. He insisted that the success of the undertaking would depend not on the skill of modern engineers, of which there was no doubt, but on the question whether the health environment could be so ameliorated as to abolish the disastrous conditions that had caused the failure of previous attempts. He urged that the last word in the fateful decision then pending, between high-level and low-level plans, respectively, should be spoken "not by the aspiring engineer, but by the profession which will be held mainly responsible should the prophecies of ill be justified by events." The temporary success of the adherents of the sea-level scheme and its speedy abandonment justified Mr. Leigh's foresight.

The article concludes: "In the lap of the gods rests the future of the Panama Canal enterprise. Whether it prove the great engineering triumph and commercial highway to which many of us look forward with confidence time alone will show, but of one credit history can never rob the United States. Among much good and evil it must record that it was under American administration that the knowledge and resources of modern science were applied to the hygienic redemption of the once noisome isthmus. Such fruits of labor in this direction have already been gathered that they promise to rival as a worthy monument of American achievement even the canal itself." We can thankfully accept this ungrudging praise, for we know it to be as just as it is generous.—(Abstract from editorial, Journal A. M. A.).

THE STATE'S DUTY TO ITS CITIZENS FROM A MEDICAL STANDPOINT.*

BY J. A. MCCOMB, M. D., LEBANON, MO.

This theme is so extensive that the writer will direct attention to only a few things that to him seem fundamental.

A state is an organization of individuals, living within fixed boundaries, and is so organized for mutual benefit. Residing within the great commonwealth of Missouri there are three and one-half millions of people, each a ward of the state with an equal claim for any help within the power of the state to give.

The social, commercial and religious life of these differ so widely that it has been necessary for the state at times to enact laws under the rule, "The most good to the greatest number."

There is the one with capital and the one without, each clamoring for laws beneficial to himself and urging his citizenship as a reason therefor, there is the one with the raw material to sell and the one with the finished product to dispose of, each urging the same reason; and so on throughout the many varied and diversified interests of the state. There is, however, one common interest upon which all men every where are united. The word above every word, the one word most dear to the heart of every physical man is *Health.* What will one accept in exchange for it? What will one not give to get it? Have you it for sale? Name your price and you may literally wallow in the wealth of the world, for millions are offering you their all for it. Do you desire it? Listen and it shall be told you where to obtain it. Go thou to Father Adam and beg of him that body he left in the Garden of Eden when God drove him hence, and you shall have perfect health, for nowhere else does it exist.

The health of the citizens of a state is its first and greatest asset. A state whose inhabitants are sickly will never become a rich and populous one, because sickness is an expense and the diseased one is not a producer but always a consumer of wealth, either of his own or others. The states of this Union known to be sickly are of the slowest growth, either in numbers or wealth. One of the strongest talking points of a real estate man is the healthfulness of the locality. One of the first questions of a prospective buyer is as to the health of the community. If doubtful on this point, the trade is off. This is as it should be; all realize the probability of the grim reaper garnering a loved one, or perchance one's own life be taken, hence all men everywhere are inter-

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

ested in promoting the healthfulness of the state in which they live. Health is the first asset of the state because the worker, to achieve the most possible, must first of all be a well person. It is the greatest asset because the larger the number of strong, vigorous workers, the larger the result accomplished. This being true, the first duty of the state is to the physical welfare of its citizens. The state of Missouri has about six thousand physicians which it has licensed to care for the health of the other three and a quarter millions. She has said to these physicians, "Go forth on your mission of healing and if the people will contribute to your necessities you may live in this state."

She has turned from them to thousands of literary professors, and teachers of the state, "Here is your licenses, you go forth and teach the youth of this state to spell, read, write and figure; come to me and I will pay you." Good, and no man worthy the name would lift up voice or pen to detract one iota from the great educational institutions of this state. But look you at the young men as they pass out with their diplomas to become workers for their beloved state; stand them by those who have graduated from the farm. Look you well—mark them well, so you may recognize them again. Five years have passed, look now. See the college men far in advance, except the many over whom have stood the undertaker and the mourner. Look again,—ten, twenty, thirty years are gone, the college men still leading, but many, very many through lack of endurance have given up the struggle and their places filled by the ones made tough and hardy through exposure to heat and cold, sunshine and rain. The young woman came from college admired and loved by her friends and family; to-day the physician and surgeon are striving to make her life fairly comfortable and the pediatrist is wearing his life away trying to cure her nervous children.

If this picture seems overdrawn it may be relieved by having the strong young man from the farm marry the June graduate and the young college man come to the Ozarks for his wife. The fact remains that the schools turn from their doors far too many girls and boys whose doom is sealed long before they receive their degree. Probably not so many as formerly. The blame cannot be charged against education, for all admit that is what they need. It cannot be placed against the teachers, for they are doing as they have been directed to do. The parent is ignorant that his loved one is in danger. What then? The creator is greater than the created, so to the writer it clearly becomes the duty of the state to provide that these pupils be examined by competent examiners at stated intervals; that such provisions be made for them as will be for their best interest, always from a physical standpoint first. Every child in the state of Missouri, from the time he enters school until he leaves, ought to be under the direct supervision of a physician. Cost!—of course it will cost, but it is money well spent and will bring the state larger returns on the investment than anything it ever attempted. If the weak child can be made strong and educated as

well, you have the difference between an indigent and one caring for an indigent. Is it too much to predict that such supervision, with the inevitable education of fathers and mothers resulting therefrom, together with the progress growing out of such education, would, after a few generations, depopulate the insane asylums, the poorhouses, the medical wards of hospitals, and especially the venereal wards? Note the many expressions of specialists in the last few years confirming this prediction. These examiners must be prepared for this special work, and in addition to the examination of the children, they should be apt to teach and give to each school a course of lectures during the year on physiology and hygiene, with special lectures to the girls and boys of proper age on sexology.

This plan is only a suggested one and in the rough, to be changed and perfected by time and experience. The two points the writer hopes to impress is, first, the great need of physical education, and, second, that the commonwealth is the proper one to have this in charge and to bear the expense. One need not take the time of a medical association to convince it of the inestimable value such supervision and lectures would be to the state. The examiners, of course, would not interfere with the regular physician, but would insist, and if necessary, enforce his recommendations. All treatment of whatever kind, however, should be directed by the family physician or under his instruction. A physician feels justly proud, with an inner consciousness of satisfaction, when he has been instrumental in saving the life of a child, whether anyone else knows it or not, but how much greater is the compensation if that one be multiplied many times. To the writer, this plan seems to get at the foundation of physical perfection. Before life can attain its highest excellency, with its superstructures of mental and moral beauty, it must have its foundation laid deep and strong in physical perfection. The state has recently done well in providing for the control of certain diseases, but it has not yet gotten hold of the great idea of prophylaxis. When it does, physicians will be spared the mortification of having the legislature, urged by some of the states brightest minds, expend thousands of dollars to erect monuments of marble to the memory of the dead, as has been done recently in Missouri. Then will the physician rejoice in seeing these thousands spent for the more noble and glorious purpose of building living monuments of strong and healthy bodies, fit to become fathers and mothers of a succeeding generation, still more noble and glorious than they.

It is hard to find a place for a period for this paper, but it must be with these words—then will the great commonwealth of Missouri find the true meaning of its motto, "The Welfare of the People is the Supreme Law."

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

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EDITORIAL

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS.

The International Congress on Tuberculosis, held in Washington from September 21 to October 12, is now a memory only. Those whose misfortune it was not to have attended these interesting deliberations, missed a rare treat. One cannot refrain from mentioning the completeness in every detail of program, arrangements and exhibitions. The task was herculean, but seemingly not too much for those in charge, and congratulations are in order. Some apology, however, is due our distinguished foreign guests for the incompleteness of the building in which the congress was held. In itself, the unfinished condition of the building was to be tolerated, yet our great government should have shown a little more consideration, and had the stone and brick masons, carpenters, roofers and laborers desist from their too apparent and noisy demonstrations in trying to complete, in one week, the half completed new National Museum building assigned for this extremely important event. During the first few days the din drowned the voices of essayists and speakers. A compromise, seemingly, was later effected and the noises were lessened, yet at times were too painfully present. It seemed, almost, as if we were meeting in the government cannon foundry.

The exhibits were such that it required hours to inspect them, even casually, and days could be spent profitably in studying their import, from the displays of instructive signs, instruments, literature on how to

combat, prevent and cure,—attracting medical and lay interests alike,—to the many exhibits along pathological lines showing the effects of the tubercle bacillus on man and beast. Of the foreign nations, Germany had the most complete exhibits. Of our own nation, the Empire State with her chief city, outdid herself, and many of the other states made a very creditable showing.

While Missouri confined her work along educational literature lines, the little book "What Missouri is Doing," was sought after and many favorable comments were expressed. The supply was soon exhausted, the book finding its way into appreciative hands. Although Missouri did not make a display, she was considered the good worker along the right path in the West. We also, to our credit, showed effective work done, such as the Mt. Vernon Sanitarium and the splendid organization of some of the Missouri cities and counties; the work in St. Louis, of educating the masses in the unique outdoor lectures, received favorable comment on many occasions.

The scientific program was divided into seven sections, seven different meetings on different subjects, in several languages, all referring to the bacillus tuberculosis, were held at the same hours each day; however, joint sessions of two or more sections on allied topics, were held; and to the credit of the programe committees it must be said that all essayists were on hand and everything moved with clock-like precision.

Secretary of the Interior Cortelyou, in his opening address, gave valuable statistics, gathered by the government, which appalled even those who were versed in such lore. Among the more striking points in this address were the statements, that in 115 years of yellow fever scourge, a less number of deaths could be attributed to this cause, during all that period, than to the one disease tuberculosis in the year 1907 alone; that three times less deaths occurred in action and from wounds during over four years of the Civil War than from consumption during the past four years. He made the further statement, that if a war in the United States were to carry off 150,000 people each year, we would be horrified beyond measure, while such, in fact and figure, is the annual loss from tuberculosis.

After short talks from many of the foreign delegates and representatives, in as many different languages, the now world famous Congress on Tuberculosis was declared at labor.

Germany was well represented by famous men, Koch, staid and stoic, the cynosure of all eyes, receiving ovation after ovation in a calm, expressionless and dignified manner, while every one wondered what new thing he might have to say to startle the nations. His position was the same as that which he expressed in 1901, during the

British session, that human infection by bovine tubercle bacilli rarely occurs; clinging tenaciously to the rarity of its occurrence he admitted that it does occur. His splendid tribute to the work of Dr. Theobald Smith of Boston, who first called attention to the different biological features of human and bovine tubercle bacilli, which Koch acknowledged caused him to pursue further researches, was proudly received and applauded by the American contingent, the other nations joining heartily in the applause. Prof. Smith, from that moment raised to the eminence of being the next most important personage in the meeting, rose to discuss Prof. Koch's able paper, and it was at once seen that he differed widely from the views expressed by the eminent German. One notable quotation was to the effect that in one-half of the babies afflicted with tuberculous glands of the neck and in the abdomen, cow's milk had been the traceable cause of the infection. Prof. Arloing of Lyons, France, concluded his remarks by saying that his experience revealed the fusion of the classic types, and urged the necessity of extreme precaution against tuberculosis, both human and bovine. Koch's own government aligns herself against Koch's views, recognizing even more strongly than his opponents the expediency of strict bovine inspection to avoid the spread of tuberculosis in Germany. Dr. Raw, of England, while appreciating two distinct infections, said his work and observations led him to the conclusion that with the eradication of bovine tuberculosis infant mortality from this cause would be reduced to a minimum. Dr. Newsholme, of England, after multifold experiments, concluded similarly regarding its transmissibility. Our own Ravenel, of Wisconsin, after numerous experiments, has proven, indisputably, the similarity of both forms of tuberculosis, and would regard it as extremely unfortunate if the impression should go forth from the meeting that few cases were due to bovine tuberculosis infection. Prof. Koch's extreme stand seems unfortunate; his influence is such that his views on the extreme rarity of bovine infection can be so garbled as to make it appear that bovine infection, as a cause of tuberculosis in the human, is nil; and the American people are so readily convinced that the great Professor Koch must be right, that such a result would be most unfortunate for man. Koch admits, however, that the infection does occur; be it but once in one thousand it is once too often, and we must not lose sight of this serious fact. We must consider also that for several years he has been engaged in other bacteriologic channels, and while his conclusions may be accurate through the work of others under his guidance, it must not be forgotten that the Americans, the French, the English and other Germans were there who personally reported what their findings were and concluded with one accord against

Prof. Koch. It is therefore hardly a case of the one man of the jury considering the other eleven obstinate. We can not and would not so view it, because it would be untrue, but a difference of opinion of rarity and common occurrence does exist. And by far the majority of equally painstaking workers lean toward the commonness of transmission.

In Section 7 (Tuberculosis in Animals and Its Relation to Man), a rather impressive paper was read by Hess of New York, in which he stated that in 107 samples of milk, taken from dairy wagons promiscuously, he found 16 per cent. contained tubercle bacilli. And thus throughout the meeting, in every section, research work was reported and all without exception unequivocally opposed Prof. Koch's ideas of the rarity of the occurrence of bovine infection in the human.

The feature of early diagnosis seemed next to attract widespread attention. Von Pirquet demonstrated his cutaneous reaction at the Children's Hospital. He now uses the Koch Old Tuberculin pure—not the 25% solution he at first advocated. Detri, at the same time, offered his combined cutaneous method,—vaccination with human and bovine tuberculin—to show by which bacillus the child was infected. If by bovine tubercle, the bovine inoculation should show a reaction in from 12 to 24 hours; if by human tubercle bacillus the area of human tuberculin would react. It is seen therefore that many conclusions can be arrived at. Time and work under less exacting surroundings will prove their percentage utility.

Calmette was there, and his paper dealt with the ophthalmo reaction. His results were gratifying in 6,000 cases and he had met with no unfortunate experiences; but every one else apparently had a more or less different result to relate, for it seemed that the ophthalmo reaction is on the wane. It may be said at this point in passing that the lay press, ever alive to the dramatic, seized upon this discussion and made the most of it as a news feature; while the ever loquacious, garrulous doctor, rushed into print and objected to something concerning which he had no conception, either as to its *modus operandi* or its diagnostic value.

The serum treatment came in for an afternoon of interesting discussion. Many serums were shown and many views, encouraging and discouraging, were expressed, showing that the experiments and results obtained are widely at variance. In a few years, perhaps, more definite results in larger numbers may bring the Utopia in serum treatment.

If the work of this famed congress did no more than impress facts that are old, and revive the interest of the world in this dread de-

stroyer and teach that prevention is best and that early recognition and early cure offer the most favorable results, its work can be called blessed.

It should be a source of great pride to the medical profession of this country that the attendance at this congress was so large, that the interest was so intense and that American physicians and the American people have been found to be fully alive to the great opportunities before them, and fully capable of meeting and solving problems that are agitating the greatest intellects in the world in the work of preventing and curing disease. In this labor the newspapers of this country are beginning to show a high appreciation of the part which they should play in furthering the objects to be attained, and during the congress all the great dailies throughout the country gave largely of their space and faithfully reported the deliberations of this great gathering.

L. H. B.

CARSON CONVICTED.

The conviction of Hiram Carson, alias "Dr. H. C. Carson," of Kansas City, for practicing medicine without a license, is a distinct victory for the State Board of Health and for the prosecuting attorney of Kansas City, and further confirms the powers of the State Board in punishing violators of the new medical practice act. Carson was assessed the maximum fine ($500.00), the decision being rendered by Judge Porterfield of the criminal court.

Mr. George Creel, editor of the *Independent,* began the crusade against Carson two years ago, assisted by the Jackson County Medical Society, and the case has dragged along through this period of time due, chiefly, to the dilatory tactics of the attorneys for the defense. The state's attorneys were Messrs. Walsh, Morrison and Bland, of Kansas City. In commenting upon the case the *Independent* says:

"This conviction is the beginning of the end for the laughable old charlatan who has battened on this section for so many years. He has appealed, of course, but that in no wise operates as a stay of execution against further prosecution. To be sure, he has fifteen attorneys, but they are a high-priced, rapacious lot, and their steady employment will prove a drain that even Carson's overflowing coffers will find it hard to stand.

An effort will also be made to secure his arrest on felony charges, such as obtaining money under false pretenses, for what else is it when he takes the last dollar from consumptives, and gives them tissue paper slips as a guaranteed cure?

More stringent legislation should also be passed at the next session so that the outrageous fellow can be permanently put out of business, and all the horde of cancer ghouls and similar quacks along with him. They have cursed this community long enough, and the mere fact that they spend thousands of dollars in advertising does not give them any standing in the eyes of the law."

As evidencing some of the methods pursued by Carson, in his business of relieving the sick and afflicted, the following from the *Independent* is illuminating:

> "Carson occupied a witness chair several days handrunning. By the advice of his counsel, James A. Reed, he refused to answer almost every question on the ground that it would *tend to incriminate him,* but under Mr. Walsh's grueling examination, the following facts were brought out:
>
> That his only medical education was secured from the American Health College of Cincinnati, a fake institution that was suppressed by the authorities.
>
> That his first method of treatment was a sort of massage with vaseline, plentifully mixed with red pepper so that it would give the effect of 'magnetism' or 'vital force.'
>
> That he progressed to the 'tissue slip' plan. These slips, which he claimed to 'magnetize' by holding between his hands, were alleged to cure every disease if pinned to the underwear or night-dress, between the shoulder blades, 'over the great nerve center of the human body.'
>
> That he did not know, at the time of holding them between his palms, whether he 'magnetized' them or not, and that he had to wait for 'results' to find out. But it was shown that he always got his money in advance, and that there were no cases of refund except when prosecution was imminent.
>
> That this paper, which he claimed to be of a 'very peculiar kind,' was bought from a local paper house, and cut up to his order.
>
> That he had no knowledge that would enable him to tell one disease from another, and that skilled advertising writers were responsible for his learned discourses."

DELEGATES TO INTERNATIONAL CONGRESS ON TUBERCULOSIS MEET AT MARQUETTE HOTEL.

About sixty delegates from Texas passed through St. Louis on their way to Washington, D. C., to attend the International Congress on Tuberculosis. At an informal meeting of members of the Texas, Missouri and Kansas delegations held at the Marquette Hotel, the following resolutions were unanimously adopted:

> WHEREAS, the tendency of physicians and charitable organizations over the country is even now to send advanced, indigent con-

sumptives from their homes to climatic resorts, notably parts of Texas, Colorado, and the Southwest, and

WHEREAS, the consensus of opinion among the best authorities is that climate alone can not cure tuberculosis, and

WHEREAS, boarding houses and hotels in many resorts no longer open their doors to this class of people, thereby depriving them of any chance of securing proper accommodation, and

WHEREAS, the sanitariums and eleemosynary institutions of the Southwest are already overburdened with such cases and the people are called upon to do double duty in that they must take care of others besides their own consumptives;

THEREFORE, be it resolved, that all states and territories throughout the country and all physicians and charitable organizations be urged to discourage the aimless drifting of the average consumptive, and that all advanced consumptives be kept within the confines of their own city, county, or state, and that the legislatures of the several states be urged to pass such laws as will insure the building and maintenance of sanitariums for curable cases and hospitals for advanced and incurable cases.

EDITORIAL NOTES

THE FISCAL YEAR of the State Association has been changed and now ends on December 31st, instead of April 1st. Dues for membership in the State Association therefore must be paid to the state secretary on or before January 1st of each year.

COUNTY SOCIETIES may receive new members (not delinquent members) after October 1st and credit them with membership for the balance of 1908 and all of 1909. The state secretary will register such members as members of the State Association from the time of election in the local society to December 31st, 1909, and the JOURNAL will be sent to them during the same period.

THE OFFICERS of the Section of Diseases on the Eye, Ear, Nose and Throat are anxious to obtain the names of members who are doing special work in these branches. The information is desired so that the officers can prepare a program for the Section at the next annual meeting. All members who wish to be identified with the work of the Section on Eye, Ear, Nose and Throat, are requested to so inform the officers. Communications should be addressed to Dr. J. H. Thompson, Kansas City, or Dr. T. McLemore, Nevada.

A TRAVELING "eye specialist," sailing under the cognomen of "Dr." H. M. Blumenthal, was given a "treatment" in 'Squire McVeigh's court at

Gallatin, and fined $50.00 and costs for practicing medicine without a license. The Gallatin *Democrat,* commenting upon Blumenthal's achievements as an eye specialist, remarks as follows: "Dr. Blumenthal has been making Gallatin for several months. He was a pleasant appearing fellow with a foreign brogue and we did not suspect him as being a 'quack.' He had a number of patients here and we understand was paid very large fees by some of them—in fact a member of the *Democrat* force is still catching at his breath, the result of the near-separation from $35 cash for a pair of the doctor's powerful glasses and some of his 'magic' eye wash."

These charlatans are almost always "pleasant appearing" fellows, and it is quite characteristic for them to affect a "foreign brogue," an accomplishment which seems to act as an anesthetic in the operation of separating the victim from his money.

We are indebted to Dr. M. A. Smith, secretary of Daviess County Medical Society, for the above information and we feel sure that the announcement will be of interest and a source of encouragement, to members of other county societies in their efforts to protect the public from charlatanism and quackery.

THE FOLLOWING ARTICLES have been accepted by the Council on Pharmacy and Chemistry:

Adrin Sol. 1:500 (H. K. Mulford Co.).
Adrin Tablets 1-65 gr. (H. K. Mulford Co.).
Adrin Tablets 1-100 gr. (H. K. Mulford Co.).
Adrin Tablets 1-200 gr. (H. K. Mulford Co.).
Adrin and Cocaine Hydrochl. Tablets (H. K. Mulford Co.).
Adrin and Sparteine Sulphate (H. K. Mulford Co.).
Adrin Ointment (H. K. Mulford Co.).
Adrin Suppositories (H. K. Mulford Co.).
Adrin Comp. Vaginal Suppos. (H. K. Mulford Co.).
Gr. Eff. Carlsbad Salt (Artificial) with Phenolphthalein (Mulford Co.).
Panase (F. Stearns & Co.).
Panase Essence (F. Stearns & Co.).
Panase Tablets (F. Stearns & Co.).
Hemaboloids (Palisade Mfg. Co.).
Spirosal (Farb. of Elberfeld Co.).
Gr. Eff. Bromide and Acetanilide Comp. (H. K. Mulford Co.).
Gr. Eff. Caffeine and Sodium Comp. (H. K. Mulford Co.).

From the former list, Ichthyolum Austriacum has been omitted, and at the request of the manufacturer the title "Diabetin" has been changed to "Levulose, Schering."

OBITUARY

H. W. BARTSCHER, M. D.

Dr. H. W. Bartscher, whose sudden death in the court room after leaving the witness stand, shocked his professional brethren as well as the citizens of St. Louis to an unusual degree, was born in St. Louis on the 10th of May, 1859. He was entered as a pupil in the Clay public school at an early age. After passing through the grammar school he attended the Central High School, from which he was graduated at the age of eighteen, in the spring of 1877. Immediately after graduation he became a student in the St. Louis Medical College from which he received his degree in 1880. For the next three years we find him adding to his experience through work in the city institutions; for one year he served as an interne at the City Hospital, one year at the Female Hospital, and one year at the Poor House—the department for the chronic insane of the St. Louis Insane Asylum. At these two latter institutions he also acted in the capacity of druggist.

After exhausting the clinical opportunities of his native city, he repaired to Europe for post graduate study, and under Grawitz at Greifswald, Virchow and Koch at Berlin, and at the great clinical school of Vienna, he acquired that thorough knowledge in pathology and clinical medicine which upon his return to St. Louis made him the scientific, successful practitioner.

Unlike most general practitioners, he continued to the time of his death to keep himself abreast of the advances in pathology and bacteriology, more especially in their application to clinical medicine. His thorough scientific training in the laboratories of Europe preeminently fitted him to teach the subjects in which he was most interested,

and no classes of students have received more thorough training in histology, bacteriology, and pathology than those who enjoyed the privilege of his instruction, as he occupied at various times these chairs in the Beaumont Hospital Medical College. To him more than to anybody else was due the thorough laboratory equipment which was an especial feature of that institution during its existence.

He was conscientious to a fault. Infectiousness was to him no theory but a living practical fact. He carried to its logical sequence the knowledge concerning infectiousness and contagiousness which he had obtained in the laboratory and applied it in the management of the patient and his surroundings.

Nor was medicine the sole object of his efforts nor the only source of his pleasures. A student of nature in its widest acceptation, he was fond of nature's scenery; he loved flowers, as a beautiful garden which he cultivated with the assistance of his mother, his constant companion, eloquently showed. No distance was too great and no trip too arduous which promised new scenery or held out the possibility of plucking a rare flower even from the edge of a dangerous precipice. In the sweet communion with nature's most enchanting voice he was enraptured beyond expression. He acquired unusual dexterity in the interpretation of the master minds of music upon the pianoforte, and as he studied the minute construction of the human organisms, so he also studied the scientific side of music; and the compositions which he essayed give abundant evidence how thoroughly he had grasped the underlying principles of music.

But perhaps his strongest point, besides that of a successful practitioner, was his public spirited and persistent endeavor to make felt the influence of the medical profession upon the public weal. As a member of the organized profession he took an active part in its work and cheerfully assumed every duty assigned to him. He had the highest conception of civic duty; no organization having for its object the betterment of the hygienic condition of our city, but what he was an active participant in its work. To his efforts are due, more than to those of any other single individual, the enactment of the pure food bill at the last session of the legislature. The defects of this statutory enactment he was about to cure by the introduction of such amendments as he had under consideration in order properly to protect the public health against the insidious ravishments of those who acquire wealth at the expense of the public health.

The modest retiring personality of our deceased brother concealed very successfully the kind heart, the noble spirit and the professional enthusiasm which was always brightly aflame.

He was an upright man; a good citizen and most loyal friend.

F. J. L.

COUNTY SOCIETY NOTES

ATCHISON COUNTY MEDICAL SOCIETY.

The Atchison County Medical Society met at Fairfax, Tuesday, August 25th. All officers were present.

Dr. J. A. Postlewaite read a paper on "Fractures." All present took part in the discussion of the subject.

The subject for general discussion, typhoid fever, was considered, and the opinion prevailed that in infected individuals the germ-causing symptoms of typhoid remain active in the system much longer than is generally supposed; consequently, it is necessary to caution persons, after being well advanced in convalescence, about the danger of conveying the infection to others by the indiscriminate disposition of the discharges from the body.

Medical organization in this county is fairly good. The attendance at the meetings is not as large as it should be, but the members are very punctual about paying their dues and seem very much interested in the welfare of the society.

The next meeting is to be held at Tarkio, December 1, 1908.—Austin McMichael, M. D., Secretary.

CASS COUNTY MEDICAL SOCIETY.

The Cass County Medical Society met at Harrisonville, September 3, 1908. Dr. W. F. Chaffin called the society to order.

Dr. J. S. Triplett, of Harrisonville, read a very interesting paper, giving a vivid description of the Chicago meeting of the American Medical Association.

On motion Dr. Chaffin was selected to represent the society at the Antituberculosis Congress, to be held in Washington, D. C.

Dr. W. M. George, of Harrisonville, reported a very interesting case of tetanus, giving in detail the history and treatment.

Dr. Chaffin, of Raymore, reported a case of luxation of the knee, giving treatment and results, which were good.

The question of the society giving a banquet to its members and physicians of the county, was discussed, and on motion it was voted that this banquet be held at the next regular meeting.

Dr. Small, of Austin, applied for membership and was accepted.

Society adjourned to meet Thursday, November 5, 1908.—R. P. Yeagle, M. D., Secretary.

COOPER COUNTY MEDICAL SOCIETY.

The Cooper County Medical Society met in Boonville on Tuesday, October 6th, at the offices of the president, Dr. R. L. Evans.

Members present: Drs. H. V. Cordry, R. L. Evans, F. R. Smiley and J. R. Lionberger.

Dr. Evans presented a case of duodenal ulcer in which the first symptom to present itself was a severe hemorrhage. Another feature

of the case was the icterus which followed the hemorrhage, the icterus being most probably of a hematogenous origin.

Dr. Smiley presented a case of typhoid in which perforation occurred at the end of the second week, with a fatal termination. Seven days previous to the perforation the patient had had a severe pain in the right side, but no other symptoms appeared until peritonitis set in.

These and other cases were discussed by the members present and the meeting was of interest throughout.

The society adjourned to meet the 10th of November at the Missouri State Training School, where a good supply of clinical material is always available.—Jno. R. Lionberger, M. D., Secretary.

GREENE COUNTY MEDICAL SOCIETY.

MEETING OF SEPTEMBER 11TH.

After a two months' vacation the society met with 32 members in attendance. It was decided that we should continue to meet in the city council chamber and that our library would be taken care of by the librarian of the public library.

Dr. J. P. Ralston read an interesting paper on "Accidental and Unavoidable Hemorrhages." He spoke principally about hemorrhages due to childbirth. The paper was discussed by Drs. Sayres, Ruyle, Camp, Evans, Boyd, Matthews, Elkins and others.

MEETING OF SEPTEMBER 18TH.

The Post Graduate Course. Dr. J. R. Boyd gave a clinical lecture on "Physical Diagnosis: Diseases of the Heart." He called special attention to organic diseases of the heart in infancy and childhood and the good results that could be obtained from the early treatment of such cases.

MEETING OF SEPTEMBER 25TH.

Owing to the absence of Dr. T. A. Coffelt, attending the Tuberculosis Congress at Washington, D. C., Vice-President Dr. B. F. Fortner presided at the meeting. A letter from State Secretary was read, instructing that all new members secured now would be entitled to all privileges until December 31, 1909. One application for membership received.

Dr. H. S. Hill read a very practical paper entitled: "Some of the More Frequent Abnormal Presentations." He said abnormal presentations are usually due to abnormal conditions in the mother or foetus; an early diagnosis of abnormal presentations is very essential to a favorable termination of the labor and the saving of the lives of both child and mother. Anesthetics should be employed in all cases where operative interference is resorted to, yet one must be governed by the exigencies of the case and always remember that haste is an important factor in the case.

The paper was discussed by Drs. N. C. Williams, Smith, Oldham, Anderson, Ruyle, Pursselley and Camp.

Dr. B. F. Fortner read a carefully prepared paper entitled "Concussion." He treated the subject in an original manner, describing it as a "violent shaking," not alone of the brain, but it may be of the liver, kidneys, stomach and even the heart, under certain circumstances, sufficient to stop the body organs for a time at least from performing their

normal functions, thus materially lowering the recuperative powers and the vitality.

Concussions and contusions differ only in the amount of injury done. It requires a given amount of force and resistance to cause concussion; whether in a runaway buggy, car or automobile, the difference is only one of degree. Much depends on the partitions and different planes of resistance inside of the cranial cavity. Concussion does not apply to the cord.

Drs. Smith, Neer and Ruyle discussed the paper.—J. L. Ormsbee, M. D., Secretary.

HOLT COUNTY MEDICAL SOCIETY.

The Holt County Medical Society met at Oregon, September 10th.

Dr. Bullock read a paper on "Gun Shot Wounds," and exhibited several different forms of projectiles, taking up each one in its respective order, when referring to the injury done to the tissues. Discussion and consideration of the paper took up most of the time of the session; much work, therefore, had to be postponed until the next meeting of the society, which will take place at Maitland, Thursday evening, November 5th.

Drs. McClanahan and Kearney were elected to membership.

Drs. E. E. Miller, T. O. Davis, W. C. Proud, B. B. Simmons and F. E. Hogan will appear on the program for November 5th.—J. F. Chandler, M. D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY.

The Johnson County Medical Society met in regular session at Warrensburg, September 8, 1908.

Dr. Samuel A. Murry, of Holden, was elected to membership. Our society has at present a membership of thirty. Very few of the eligible physicians of the county are not on our roster.

The special number of our literary program was a paper on "Preventive Medicine," by Dr. M. P. Overholser, of Harrisonville, councilor for the district. We enjoyed the paper very much. The lines of education, agitation, organization and legislation presented in this paper should be kept before the medical fraternity by such talks, papers and public addresses. We have invited him to come back on October 13th, our next meeting date, to deliver an address, to which the public will be invited, and special efforts will be made to have a large attendance.

From now on our meetings will be monthly instead of quarterly.

I believe that even in our limited field we have a great work to accomplish.—E. H. Gilbert, M. D., Reporter.

LINN COUNTY MEDICAL SOCIETY.

The Linn County Medical Society met in Linneus, Tuesday, August 11th. The attendance was not as large as had been anticipated, but good interest was manifested in the proceedings by those who were present.

Two papers were read and discussed; the first by Dr. Ola Putman, of Marceline, on "What Major Operations Should be Attempted in Private Homes," the second paper by Dr. Robert Haley, of Brookfield,

on "Corneal Ulcers." The discussions on both these papers were animated and brought out a great deal of interesting information.

The next meeting of the society will be held at Meadville, in October.

MONITEAU COUNTY MEDICAL SOCIETY.

The regular quarterly meeting of the Moniteau County Medical Society was held in Dr. W. R. Patterson's office at Tipton, September 10th. The president, Dr. A. V. Thorpe, was absent and the vice-president, Dr. L. L. Latham, presided over the meeting. At roll call the following were present: Drs. J. P. Burke, J. H. Lang, Henry Freudenberger, L. L. Latham, J. W. Marsh, J. B. Norman, W. R. Patterson, J. M. Robertson, G. S. Wilson, W. H. Reynolds and Harry Marsh; visitors, Drs. Chas. Fry, John Taylor and J. L. D. Blevens.

Dr. J. W. Marsh read a paper reporting a case of appendicitis in which almost all the cardinal symptoms were absent. The necropsy showed a perforated appendix. The discussion of this case was unusually interesting and each one present took part.

Dr. G. S. Wilson presented an interesting case.

Upon motion, Drs. W. R. Patterson, L. L. Latham and J. H. Lang were appointed a committee to arrange for a banquet, to be held at the time of the next meeting.

The society adjourned to meet in California, December 10th.—W. R. Patterson, M. D., Reporter.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

The regular meeting of the society was held on Wednesday evening, September 9, at Dr. Woodson's Sanitarium, Mountain Meadow Park, in the suburbs of St. Joseph. In the absence of the president, Dr. Jacob Geiger was called to the chair.

Dr. Daniel Morton called attention to the need of an emergency ward at the police station, for the care of suspected insane or demented patients, pending examination and disposition of the case. It was suggested that the matter be referred to the Board of Health and City Council, in order that the proper arrangements may be made while alterations are in progress at the central station.

The secretary called attention to the International Congress on Tuberculosis, and requested the president to appoint delegates from the society.

Dr. Woodson gave an instructive lecture on the diagnosis and treatment of melancholia, which was listened to with marked interest.

After adjournment the members of the society were shown through the institution, which has recently been enlarged, the tour of inspection terminating at the dining room, where a most appetizing repast awaited the guests, covers being laid for forty-two.

Mayor Clayton, in a characteristic speech felicitated the medical profession of the city on having such an excellent institution as Dr. Woodson's, and upon living in the healthiest city in the United States. The mayor further said he believed an organized, capable medical profession was largely responsible for the world-wide reputation gained by St. Joseph as the healthiest city.

Dr. O. B. Campbell responded on behalf of the society, and a rising vote of thanks was tendered to Dr. Woodson for his generous hospitality.—C. W. Fassett, M. D., Secretary.

ST. LOUIS MEDICAL SOCIETY.

The St. Louis Medical Society resumed regular weekly meetings on September 19th. The scientific program of the evening consisted of a paper by Dr. Sidney I. Schwab, entitled "A Study in Paranoia," and one by Drs. Jesse Meyer and J. E. Cook, entitled "Intestinal Sand; the Banana as One of Its Sources." The meeting of September 26th was devoted to a consideration of a paper by Dr. W. B. Outten, entitled "Classification of Joint Injuries Occurring in the Surgery of Violence."

Both meetings were largely attended and the interest in the scientific work of the society showed no evidence of deterioration.

The Council will meet on October 7th.

BOOK REVIEWS

Diseases of the Nose, Throat and Ear. Medical and Surgical. By William Lincoln Ballenger, M. D., Professor of Otology, Rhinology and Laryngology, College of Physicians and Surgeons, of Chicago University of Illinois. Octavo, 896 pages, with 467 engravings and 16 plates. Cloth, $5.50 net. Lea & Febiger, publishers, Philadelphia and New York, 1908.

This new work is notable, in the first place, for its unusual breadth, as it fully covers the whole of the three subjects. The book is very comprehensive, for it deals with the surgical as well as the medical treatment of these regions, and also of the accessory sinuses. The work is lavishly illustrated with original drawings and in every respect reflects the best knowledge of the world on the subjects of rhinology, laryngology and otology.

The Principles and Practice of Modern Otology. By John F. Barnhill, M. D., Professor of Otology, Laryngology, and Rhinology, Indiana University School of Medicine; and Ernest de W. Wales, B. S., M. D., Associate Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine. Octavo of 575 pages, with 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.50 net; half morocco, $7.00 net.

In the preparation of this work, which is intended for the use of students and practitioners of general medicine, the following objects among others have been kept in view: To modernize the subject; to correct certain traditional beliefs; to advocate the earliest possible prophylaxis and treatment; to emphasize the importance of a thorough examination and a definite diagnosis as a basis for rational treatment; and, finally, to illustrate thoroughly the text. These certainly are high aims and it would seem that the authors have succeeded in accomplishing what they have attempted to do. The volume clearly represents the results of personal experience as practitioners and teachers.

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.*

BY TORALD SOLLMANN, M. D., CLEVELAND, OHIO.

I. INTRODUCTORY.

For three years the Council on Pharmacy and Chemistry has labored at its task of investigating proprietary remedies, compiling and weighing evidence, editing and publishing information. With the appearance of the third edition of its little book—New and Non-Official Remedies—which will be out soon,** practically all the eligible proprietary preparations on the market will have been classified, and the end of this task will be in sight. Will this mean the end of the labors of the Council? At a recent meeting of the Board of Trustees of the American Medical Association four very active men were appointed, or reappointed, to the Council, to fill the places of those whose time of service had expired. The Trustees further acceded to the request of the Council for the appointment of a staff of clinical consultants or associates. This does not look as if the Council intended to go into retirement.

Of course, there will need to be continued investigations of new discoveries and some supervision over those which have been approved. Products which for one reason or another have not yet come up to the requirements, are making serious, honest endeavors to do so, and it may be presumed that the number of these will increase. The aid extended to them for this end involves an amount of work which few outside of the Council can realize. But all this is routine, merely a part of what the Council has done all along. If this were to be its only work in the future, the membership of the Council could be reduced. The fact is, the work which the Council has done so far, important as it has been, was largely preliminary to a larger and broader aim—the general reformation of what is debased and debasing in the present status of therapy. The therapeutic evils of the day may have many roots and branches, and they all need more or less pruning. But the most glaring evils were those arising from prescribing secret or semi-secret proprietaries, and the reformation of these was accordingly the first goal of the Council. The first step was the obvious one of gathering the necessary information and it was on this that the Council has been mainly engaged; and this is the part of the work which is now largely accomplished.

The next step, which must soon be taken, is that of acquainting the medical public with what the Council has learned, and securing the cooperation of physicians in making this information effective. Up to the present the task of the Council has been laborious, indeed, but plain.

*Reprinted from Jl. Am. Med. Assn.

**Now ready.

Now it becomes more difficult. Up to the present time the Council could work in silence—now it must use its voice. What it has done and hopes to do; what use to make of its findings and advice; what part must be played in this movement for better therapeutics by every physician who cares for the welfare of his patients—for the progress of medicine—these matters must be thought out and discussed.

These were the thoughts and considerations which led me to accept the invitation of the chairman of the Council and editor of THE JOURNAL to write a series of short papers on these questions as I view them. I have accepted the invitation with honest diffidence, with the realization of deficiencies in ability, knowledge, opportunities and time. In extenuation, however, I plead the honest willingness to do my share toward a movement which, as I conceive it, is the most important that has occurred in the domain of medicine for a generation at least. Surgical technic, physical and clinical diagnosis, anatomy and pathology, laboratory research—in short, every department of medical science is making satisfactory progress. Therapeutics alone has not kept pace; in some respects it has gone backward. Is it fair to the patient to dismiss the subject with a shrug of the shoulders? How many have honestly and earnestly labored toward its advancement? Is it astonishing that therapeutics is where it is and what it is?

To avoid misunderstandings, I must emphasize that in these papers I shall speak as a private in the ranks and not as a member of the Council. I shall, indeed, aim to represent the sentiments of this body, as I know them; but as it would be obviously impractical to submit to them every word that I shall say, here and elsewhere, it would not be fair to saddle the Council with any of the responsibility.

(TO BE CONTINUED.)

AMERICAN MEDICAL ASSOCIATION.

Next Annual Meeting at Atlantic City, N. J., 1909.

President: HERBERT L. BURRELL, Boston.
President Elect: WM. C. GORGAS, Ancon, Panama.
Secretary and Editor: GEORGE H. SIMMONS, 103 Dearbon Ave., Chicago.

MISSOURI STATE MEDICAL ASSOCIATION.

Next Annual Meeting, Jefferson City, May 18, 19, 20, 1909

President: A. R. KIEFFER, St. Louis.
Vice Presidents:
D. B. FARNSWORTH, Springfield; W. J. FRICK, Kansas City; J. B. NORMAN, California; C. H. DIXON, Holliday; M. A. SMITH, Gallatin.
Secretary: A. W. McALESTER, Jr., Kansas City.
Assistant Secretaries: WILLARD BARTLETT, St. Louis; W. R. PATTERSON, Tipton; T. McLEMORE, Nevada.
Treasurer: J. FRANKLIN WELCH, Salisbury.

Medical Section.

Chairman: E. E. GILMORE, Adrian. Secretary: W. R. PATTERSON, Tipton.

Surgical Section.

Chairman: PAUL Y. TUPPER, St. Louis. Secretary, WILLARD BARTLETT, St. Louis.

Eye, Ear, Nose and Throat Section.

Chairman: J. H. THOMPSON, Kansas City. Secretary, T. McLEMORE, Nevada.

ORATORS.

Oration on Medicine:

R. H. GOODIER, Hannibal.

Oration on Surgery:

F. J. LUTZ, St. Louis.

COMMITTEES.

Committee on Scientific Work.

E. E. Gilmore, W. R. Patterson, Paul Y. Tupper, Willard Bartlett, J. H. Thompson, T. McLemore.

Publication Committee.

W. B. Dorsett, Chairman; M. B. Clopton, M. C. Shelton.

Committee on Public Policy and Legislation.

H. E. Pearse, Chairman; R. M. Funkhouser, F. R. Newberry.

Defense Committee.

F. J. Lutz, Chairman; W. B. Dorsett, Joseph Grindon.

Committee on Medical Education.

B. M. Hypes, Chairman; C. M. Jackson, O. B. Campbell.

Committee on Tuberculosis.

E. W. Schauffler, Chairman; Geo. Homan, J. R. Lemen, W. E. McKinley, J. R. Boyd.

Missouri Society of Medical Secretaries.

President, Foster W. Burke, Laclede; First Vice-President, M. A. Smith, Gallatin; Secretary-Treasurer, Chas. Wood Fassett, St. Joseph.

Societies in Affiliation with the State Medical Association.

County.	President.	Address of President.	Secretary.	Address of Sec'y
Adair	J. S. Gashwiler	Novinger	E. C. Grim	Kirksville.
Andrew	John Husher	Rosendale	B. E. Miles	Fillmore.
Atchison	E. A. Lewis	Rockport	A. McMichael	Rockport.
Audrain	W. W. McFarlane	Mexico	C. A. Rothwell	Mexico.
Barry	Wm. M. West	Monett	D. L. Mitchell	Cassville.
Barton	A. B. Stone	Lamar	C. F. Brown	Lamar.
Bates	H. A. Rhodes	Foster	E. N. Chastain	Butler.
Benton	E. L. Rhodes	Lincoln	W. S. Jones	Lincoln.
Boone	W. A. Norris	Columbia	A. W. Kampschmidt	Columbia.
Buchanan	H. S. Forgrave	St. Joseph	Chas. W. Fassett	St. Joseph.
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Caldwell	C. O. Dewey	Breckenridge	Tinsley Brown	Hamilton.
Callaway	H. I. Owen	Fulton	Martin Yates	Fulton.
Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek.
Cape Girardeau	R. F. Wichterich	Cape Girardeau	E. H. G. Wilson	Cape Girardeau.
Carroll	W. C. Baird	Bogard	R. F. Cook	Carrollton.
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Cass	W. F. Chaffin	Raymore	R. P. Yeagle	Pleasant Hill.
Cedar	Kimball Hill	El Dorado Springs	J. W. Dawson	El Dorado Sprin
Chariton	C. H. Temple	Rockford	C. A. Jennings	Salisbury.
Christian	J. C. Young	Ozark	J. A. Robertson	Ozark.
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Cooper	R. L. Evans	Boonville	J. R. Lionberger	Boonville.
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville.
Daviess	W. L. Brosius	Gallatin	M. A. Smith	Gallatin.
DeKalb	E. T. Stroup	Weatherby	R. A. Evans	Amity.
Dent	A. F. McMurtrey	Salem	W. E. Rudd	Salem.
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Harrison	W. H. Wiley	Ridgeway	J. H. Morroway	Ridgeway.
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Pettis	C. Bohling	Sedalia	Frank R. Morley	Sedalia.
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Washington	J. A. Eaton	Belgrade	W. S. Smith	Belgrade.
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ORIGINAL ARTICLES

THE OPHTHALMO-TUBERCULIN REACTION. OBSERVATIONS ON ONE HUNDRED CASES WITH A SUMMARY OF THE OBSERVATIONS OF OTHERS.*

BY A. W. MCALESTER, JR., M. D., KANSAS CITY, MO.

There is no subject in the domain of internal medicine that is to-day accorded such special consideration as that of tuberculosis, its diagnosis and its treatment. There is scarcely an issue of any medical journal that does not contain an article upon some aspect of the subject, and many are devoting entire issues to it. During the past year a large amount of work has been done along the line of diagnosis; notably that of von Pirquet on the cutaneous reaction to tuberculin, that of Wolf-Eissner of Vienna, and that of Prof. Calmette, Director of Pasteur Institute at Lille; also that of Valleé on bovine tuberculosis. The experiments of these men are now too well known to necessitate review here.

The diagnosis of this disease is our basic move, and it is its early diagnosis that holds the key at the present time, to its successful treatment. We therefore have given more and more attention to, and should lay hold of any means which will aid in its establishment before the unmistakable clinical signs appear. So I have to report to you some of the results I have obtained with the method described and practiced by Prof. Calmette, as the technique is very simple, and the use of it in the hands of the conservative and observing medical man, can only result in the establishment of a reasonably certain diagnosis, and that with little inconvenience to the patient.

I shall not review the subcutaneous method of the use of tuberculin; although this has fallen into undeserved disrepute on account of

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its injudicious application and indiscriminate injection in large amounts with subsequent severe reaction. As its limitatons are better understood and as we better understand the groups of bodies concerned in the reaction of immunity—that small groups designated opsonins—and particularly when our knowledge is greater concerning the neutralization of substances produced by bacteria, we will more and more come to use these methods of diagnosis and treatment.

As to the cutaneous reaction to tuberculin, it formed the basis of Calmette's observations; it has its advantages and disadvantages. He states (Travail de L'Institute Pasteur de Lille) that observing one of the groups of symptoms making up the application of tuberculin, that is, the reaction at the site of an inoculation, he determined to apply the test to the sensitive conjunctival sac, using therefor a tuberculin free from irritating substances (glycerine and beef extractives, waxes and resins). The results of his first twenty-five cases were given to the Academié des Sciences, June 17, 1907. He has since published his observations in a bulletin of Pasteur Institute. He stated that a "one per cent. solution of purified tuberculin dropped into the eye of a tuberculous patient, gave, in from three to twelve hours, a characteristic reaction, unaccompanied by a rise of temperature or constitutional disturbances of any description; that it was inoffensive to the patient, producing only a slight conjunctivitis which disappears in from twenty-four to forty-eight hours."

In May of 1907, Wolf-Eissner reported the use in the conjunctival sac of a ten per cent. solution, but he stated that the reaction was so severe it would preclude its use in man.

Most of the tuberculin used in my cases was prepared by precipitating Koch's old tuberculin with alcohol, and thoroughly washing and drying. It was then weighed and made into tablets of 3.3 mg. so that one tablet dissolved in .33 cc. (5 m.) of sterile made a one per cent. solution of the percipitate. (I have used several brands of tuberculin: the Parke Davis Tablets or Mulford's solution are as satisfactory as any.) Tuberculin solutions are very easily contaminated and care is necessary in handling it to keep it sterile; it is very essential that it be fresh. The use of the tuberculin solution consists in placing one full minim in the eye at the inner canthus. I have my patients lie down and hold the lid so that the solution will not be squeezed out and that it may be distributed over the lower cul-de-sac. Before making such an application, one should see that there are no contra-indications to its employment. The reaction being of the nature of an inflammatory response, producing sometimes an oedema of both the palpebral and the bulbar conjunctiva, it is contra-indicated in corneal ulcerations, conjunctivitis, etc. In such cases some severe reactions have resulted, and have been reported in the literature. Eye strain is no contra-indication, though Woodcock reports a case, and I had one case of high refractive error which gave a very severe reaction. I have used it in several eye lesions with no ill effects—two of choroiditis and two of old iritis. I have further taken the pre-

caution to have all my cases except four in the hospital, so I could observe the reaction. Careful note should be taken as to the condition of both eyes, for in the most mild reactions it is necessary to compare the two carefully, as the reaction is visible only as a reddening of the marginal conjunctiva and caruncle; vision should be taken and lesions noted.

The reaction will manifest itself by a redness of the caruncle and conjunctiva of the lower lid. There may be some lachrymation or mucofibrinous exudate consisting of leucocytes and fibrin, and chemois of the bulbar and palpebral conjunctiva. The intensity of the reaction will vary, being very slight in most cases though readily observed. Calmette has described a moderately intense form of the reaction; others distinguish three or more degrees, as Aubaret and Lafon. Their classification, though not of importance, is not without value, because it tells one what to look for, and has been used by a number of others in recording the intensity of the reaction. It is simply a matter of degree: The first or mild form is seen as a diffuse redness of the lower tarsal conjunctiva, most marked towards the lid margin, and extending to the caruncle which is sometimes swollen. There may or may not be lachrymation. The subjective sensation is that of a slight smarting and itching. The patient will tell you that he thinks there is a hair in his eye, or that occasionally he feels as though there is something in the eye, but it does not trouble him; that his eye is stuck together after sleep, when you may see an increase in Meibomian secretion. There is no pain or real discomforts and no inconvenience to the patient; still you can observe quite a marked difference when comparing the two eyes.

Smithies and Walker have recorded as positive, a number of slight changes. In my first fifty-four cases I used the same stock of tuberculin used by them; all reactions obtained were of a very mild form, this form constituting the largest majority of positive reactions. They should be examined at frequent intervals as the reaction often disappears after twenty-four hours, though it should be visible at that time or the reaction not designated as positive.

In the moderately severe form the injection described extends over the entire lid, caruncle, and on to the bulbar conjunctiva. There is lachrymation, some exudate, and sensation of foreign body in the eye. One case will nicely illustrate this: The patient stated that an hour or two after the drop was placed in the eye, he felt as though there was a little grit in the eye. Eight hours after the application there was lachrymation and the lower lid was markedly injected, velvety red and somewhat chemotic. After twenty-four hours the lower lid was red, but no other evidence of reaction existed. The lid cleared in the next eighteen hours. Some will remain red for two or three days, there being no unpleasant sensations to the patient.

The intense form of reaction, as Aubaret and Lafon describe it, is marked by intense injection of both bulbar and palpebral vessels. There

is some oedema of the bulbar conjunctiva, the caruncle is red and swollen and covered with a fibrinous exudate. The reaction is at its highest in from six to twelve hours and disappears in from twenty-six to forty-eight hours. I have had several such reactions and one of the very intense form. This patient was a woman with over six diopters of hyperopia; she had a number of night-sweats, and it was thought by her physician that she had tuberculosis. One minim of a one per cent. solution was placed in her left eye. This was done in the morning; that afternoon no signs of reaction appearing, she rode four miles into the country in an open trolley-car. The next morning the condition of her eye alarmed her husband, and he called me to see her. The eye was intensely chemotic; the bulbar conjunctiva was greatly swollen; the skin surface of the lid was red; there was abundant lachrymation and fibrinous secretion; some pain in the brow and the glands on that side of the face were swollen. This extended to the glands of the neck. There was no malaise. While the eye looked to be in a serious condition the patient stated that she was not very uncomfortable. There is one noteworthy fact in this case: The reaction did not appear until late and lasted several days, the chemosis and oedema gradually subsiding. Similar delayed reactions and severe ones have been reported.

The reactions described constitute about all the degrees of reaction I have observed. I would agree with Eyre and others, and regard as a positive reaction, "any redness covering the lower lid and caruncle, coming on in from three to twelve hours after the instillation of the tuberculin, and lasting for twelve hours or more." Less reaction should be called doubtful. All positive reactions should be visible at the end of twenty-four hours. I have had one case in which the reaction came on after twenty-four hours and lasted one day. I marked this doubtful pending a second test; the patient had chronic bronchitis and was gaining weight. The greater number of reactions I have obtained made their appearance in from four to eight hours, lasting twelve hours and disappearing after twenty-four.

I have made one hundred and forty applications of tuberculin. I have had twenty-five cases of undoubted tuberculosis, the diagnosis being positive in all. Nineteen or 76 per cent. of these gave a positive reaction, five negative and one doubtful. Of the five negative, all had pulmonary tuberculosis with large cavities. One man had a large cavity, sputum loaded with tubercle bacilli, was in a fair state of nutrition, and failed to respond to three tests. These cases constituted bone lesions in which the tuberculin test is very valuable, pulmonary and gland lesions, one of tubercular peritonitis. Of the clinically tuberculous the cases were not as satisfactory. Of fourteen clinically tuberculous, six were positive and eight negative. This series of cases is necessarily unsatisfactory and records are not of much statistical value. In forty-five cases of disease other than tuberculosis, and from which we tried to exclude tuberculosis, one positive reaction was obtained in a case of

severe suppurative otitis media, which case probably had tuberculosis. These diseases include pneumonia, tetanus, empyema, chronic bronchitis, and syphilis, etc. The reaction was negative in one case of lupus and in one case of Addison's disease. Among the healthy tested I have obtained no reaction, but Dr. Clayton, of the City Central Hospital, to whom I am indebted for many clinical examinations, obtained a positive reaction in one of our apparently healthy physicians. He applied a minim to the doctor's eye as a control, and was very much surprised to obtain a very positive reaction. While the doctor was in the very best of health, and weighed one hundred and ninety-six pounds, there being no evidence of any tuberculosis, he said that when a boy he was supposed to have been afflicted with it. From the reports of others it seems we sometimes get a reaction in sclerosed lesions, though not as often as with other tests with tuberculin. It is worth noticing that in a few cases of undoubted tuberculosis, bacilli present, there was no reaction. These cases invariably had large cavities in the lungs. In the healthy person in which a positive reaction was obtained, there was a history of tuberculosis years ago.

Dr. Leon Petit, gives a summary of observations in seven hundred and forty cases of positive tuberculosis; six hundred and ninety-eight positive reactions or 94.32 per cent. with forty-two negative cases, while in 938 diseases not tubercular, 173 or 18.43 per cent positive and 765 negative. In the *British Medical Journal,* March 28, 1908, notes of the following summaries are given: 491 cases positive tuberculosis, 463 positive or 94.3 per cent. positive; 610 cases not tubercular, 563 or 92.3 per cent. negative; 106 cases positive tuberculosis, two failed to react.

From published reports so far, there is no evidence to show that there has been a positive reaction in a positively healthy person, although Baldwin and several others have reported slight reactions after repeated instillations. This is to be regarded as a hypersensitization; so, if a negative test is obtained, the second test should be applied to the other eye, otherwise the conjunctiva may become red from repeated instillations.

There have been a few had results reported by Knapp, Woodcock, Ramsey, Weins and Gunter and others, but not as many as we would have expected in the thousands of applications of tuberculin to a surface as susceptible to poisons as the conjunctiva, and in an organ in which small lesions are so often overlooked. The opinion of nearly all who have used the method is favorable, and as its author states, "it is simple, inoffensive, efficacious and elegant." There is a slight discomfort to the patient and your diagnosis, if a positive reaction is obtained, is almost certain and that within a few hours.

It is certainly a valuable aid to diagnosis, and if you use the test, remember a few cases of phlyctenular, corneal ulcerations, conjunctivitis and interstitial keratitis have been reported among the many thousands tested. See that these conditions do not exist before you apply the test,

as some eye lesion has almost always been present where a severe reaction has been reported.

The ophthalmo-reaction is still in an experimental stage. While I think it of great value, only time and repeated reports can fix its place. From the literature, I do not believe it of value in lesions of the eye, as a direct application to a latent foci might produce an activity in it. It has its limitations as have other tuberculin tests and should be used only in properly selected cases.

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EARLY POSITIVE DIAGNOSIS OF TUBERCULOSIS AND USE OF TUBERCULIN IN DIAGNOSIS AND TREATMENT.*

BY EDWIN H. SCHORER, M. D., COLUMBIA, MO.

The positive diagnosis of tuberculosis can only be made with certainty by the demonstration of the presence of the bacillus of tuberculosis. Owing to the staining peculiarities it is possible by the examination of properly made and stained microscopic preparations to make an almost definite diagnosis of the organism. The difficulty in the diagnosis is not met with in the differentiation of this organism from other bacteria, but in obtaining the material in which the tubercle bacillus is present. This last fact is to be accounted for in various ways:

1. Distribution of tubercles in the body, the lesions being found in the lungs, bones, joints, intestines, lymph glands, kidneys, brain, peritoneum, spleen, liver, genito-urinary tract, etc.

2. Distribution of bacilli in lesions, for while they are without doubt present in all tuberculous lesions, yet they are present only in small numbers in some of these, especially in the chronic tuberculous processes.

3. Material from the foci may or may not be giving off tubercle bacilli, by some obstruction the material containing the bacilli may be held back, or part of the discharging material only may contain the bacilli and this material may escape examination.

Because of these various reasons it is evident that bacteriological preparations, made directly from material supposedly from tuberculous tissues or foci, and stained by the methods designed to demonstrate the presence of tubercle bacilli, are not always available or applicable. Direct examination and demonstration of the presence of tubercle bacilli in suspected material by means of the staining reactions, is possible usually only in the sputum and exudates from discharging lesions or from material obtained at operation. Tubercle bacilli can, however, also be demonstrated in urine, feces, milk, butter, etc., but in this case before making and staining slides, usually suspension or centrifugalization are necessary.

Diagnosis of B. Tuberculosis from Sputum Examination. As far as the clinician is concerned the examination of sputum for B. tuberculosis is of most importance. It is not my purpose here to give the methods employed in the making and staining of bacteriological slides; what I wish to emphasize is the interpretation of the findings made by the physician or bacteriologist.

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I have referred earlier to the absence of tubercle bacilli in some of the discharges from tubercular lesions, and to the absence of the organisms in some parts of certain discharges containing the tubercle bacillus. A patient with pulmonary tuberculosis may have an occlusion of the bronchus leading to the lesion; his sputum may contain the bacilli at one time and be absent at another time; or the part of the slide examined may not contain the bacilli. If we consider all of these factors in the positive diagnosis of pulmonary tuberculosis from the examination of the sputum, we can readily see that usually the report "tubercle bacilli not *present*" need not be final. It is far better to state that "tubercle bacilli were not *found*," than to report that they are not present. The latter implies that, taking into consideration the difficulty to find and demonstrate the organism, the bacteriologist desires another specimen of the patient's sputum if the clinician suspects tuberculosis; while the report that the bacilli are not "present" implies that the question is settled and the patient is free from tuberculosis. To avoid this false impression it has been my custom in all cases, from which the clinician has sent me a specimen of sputum for examination, and in which the presence of the tubercle bacillus could not be demonstrated, to report that the organism could not be demonstrated or was not "found," and that I desired another specimen for examination.

Without doubt clinicians frequently get unsatisfactory reports from the bacteriologist; especially is this true when the tubercle bacilli are not found in the specimen of sputum sent for examination. To get the most satisfactory results from sputum examination requires the combination of technique, a history concerning the case and a frank statement by the bacteriologist as to his findings and opinion. In the examination of sputum for tubercle bacilli everything that can be done to facillitate the same ought to be taken advantage of. There are certain points in the method of collection of sputum and preparation of bacteriological slides, which are not always recognized but which if followed would lead to more positive diagnoses of pulmonary tuberculosis, namely:

(a) *Collection of Sputum.* Preferably the sputum discharged in the morning should be submitted to examination. When, however, the amount of sputum is small then the entire amount expectorated in the day should be collected. A wide-mouthed glass bottle, with a tight fitting stopper, should be used to send the sputum.

(b) *Selection and Staining of Material for Examination.* If the sputum is homogeneous there can be little or no selection of material; when, however, this is not the case then the best results are obtained when the sputum is poured onto a flat surface, as into a Petri dish, and the purulent, cheesy, brittle, blood-stained, or gray particles are selected. This material is then spread on at least two glass slides, fixed and stained with Ziehl's carbol-fuchsin. For decolorization a mixture of ninety-seven parts of 95% alcohol and three parts of concentrated hydrochloric

acid are of great service, as this mixture helps in eliminating the smegma bacillus. For a counter stain Wright's stain consisting of one-half gram each of methylene blue and sodium carbonate in one hundred cubic centimeters of distilled water, has the advantage that if the slide is overstained the methylene blue can be washed out with warm water.

(c) *Search for Tubercle Bacilli.* The slides are best searched for tubercle bacilli by means of the mechanical stage. Often it is necessary to spend several hours in the examination of the two slides made and it has been my custom to keep a record of the time spent in the search for the bacilli.

(d) *Methods Employed When But Few Bacilli are Present.* When the examination of the slides usually made, shows no tubercle bacilli, these organisms may at times be brought out by dissolving the mucus, which may be done by boiling the sputum with an equal volume of 2% caustic potash. After this the bacilli are thrown down by centrifugalization. Another method that has been used to demonstrate tubercle bacilli when their presence cannot be demonstrated by the regular examination, is to add nine parts of 5% carbolic acid to one part of sputum, shaking well for some time, then centrifugalizing to throw down the organisms, drawing off the supernatent fluid, and making and staining slides of the sediment. As shaking by hand is a tedious process I have made a shaking machine, the power for which is furnished by the motor of an electric centrifuge. The arms of the centrifuge are taken off and a pulley put onto the shaft. The mixture of sputum and carbolic acid is shaken for a half hour, then the centrifuge arms are again put on and the mixture is centrifuged for from fifteen to thirty minutes at the rate of fifteen hundred revolutions per minute. By this last method it has frequently been possible to demonstrate the presence of tubercle bacilli when they could not be found by the regular method of examination.

Diagnosis of B. Tuberculosis from Exudates and Operative Material. The demonstration of the presence of tubercle bacilli in exudates and material obtained at operation is made from stained slides, cut sections and by animal inoculation. Stains of the bacteriological slides and cut sections, fail at times to bring out the bacilli and the practitioner never ought to be satisfied with negative reports based on such examinations. The importance of animal inoculation cannot be overemphasized for very often the first positive diagnosis of tuberculosis is made in this way.

Diagnosis of B. Tuberculosis in Urine. The examination of urine for the presence of tubercle bacilli is of importance when the urinary tract is involved. Because of the large amount of urine and the relatively few tubercle bacilli that may be present, it is necessary to centrifugalize or sediment out the tubercle bacilli. It is further to be remembered that on the genital organs, the folds of the prepuce and clitoris, and anywhere where there is an accumulation of the secretions of the skin, the smegma bacillus may be present. This organism has

morphological and staining characteristics that frequently make differentiation from the tubercle bacillus difficult. To avoid this difficulty in diagnosis the external genitals ought to be well cleaned and the urine taken carefully. Sometimes the bacteriological method of examination fails, and for urine examinations, animal inocculations are far more important and reliable.

Diagnosis of B. Tuberculosis in Feces. Feces at times contain tubercle bacilli. This does not always indicate an intestinal tuberculosis, because sometimes these bacilli are present in the feces as a result of swallowing sputum that contains these organisms. Direct examination of feces for tubercle bacilli in bacteriological slides is difficult because of the materials composing the feces, and this method is applicable only if purulent or blood-stained mucous masses can be obtained to make the slides. Even at times when pus from tuberculous lesions is spread on the slides, the bacilli cannot be demonstrated. Animal inoculation, suspension and centrifugalization are of little assistance in the positive diagnosis of the organism of tuberculosis in feces.

Diagnosis of Tuberculosis by the Use of Tuberculin. The diagnosis of tuberculosis based on the demonstration of tubercle bacilli is often impossible. This is especially true when the lesion in question is located in such a part of the body that no material can be obtained, as is the case in internal lesions, joints, kidneys, etc. At times it is not possible to demonstrate the bacilli in material supposedly from the lesion. To overcome these difficulties new diagnostic agents have been introduced.

In 1890 Robert Koch published experiments in which he brought out the fact that the injection of killed, ground-up tubercle bacilli, in suspension in water, would, in doses not affecting well animals, kill tuberculous ones. Furthermore if the dose of injected material is reduced sufficiently and correctly adjusted this emulsion will prolong life in a tuberculous animal and at times produce recovery from the disease. Koch found that the injected bacilli are not absorbed and from this concluded that the healing substance is a soluble one, and one that comes from the body of the tubercle bacilli.

Based on these observations and conclusions Koch grew tubercle bacilli on a 5% glycerine bouillon for a period of from six to eight weeks, then boiled the bouillon culture, filtered off the bacilli, and evaporated the filtered bouillon down to one-tenth of its original volume, thus obtaining a 50% glycerine preparation. This has been called "Koch's old tuberculin." Tuberculous guinea pigs are affected much more by this tuberculin than are well pigs, one-half cubic centimeters causing death in tuberculous animals. When the amounts injected are correctly graduated it produces beneficial results in tuberculous animals.

The results of tuberculin treatment are not as satisfactory as had been expected and soon the use of tuberculin as a curative measure dropped to the background. This was not so however in its application as a diagnostic agent. The difference in effect produced by the injec-

tion of living and dead tubercle bacilli, and of tuberculin in well and tuberculous guinea pigs gave evidence of increased susceptibility to these substances in tuberculosis. On this has been based the tuberculin method of diagnosis of tuberculosis in man and cattle.

A non-tuberculous guinea pig will tolerate as much as two cubic centimeters of the concentrated old tuberculin. A tuberculous pig will die when 0.5 cc. are injected subcutaneously. Man, however, is much more susceptible to tuberculin. A healthy individual will tolerate 10 milligrams, and even at times 50 to 100 milligrams will produce no ill effects, but in a person with tuberculosis doses varying from one-tenth to ten milligrams cause local and general reactions of varying degree.

The local reactions in man can best be seen in lupus and tuberculosis of the joints. From four to six hours after the injection of tuberculin, the diseased tissues begin to swell, become red and hot. In the guinea pig, killed during the time of the reaction as was done with the animals I am showing you, one observes a marked congestion and hyperaemia about the lesions. In the peritoneum the reaction is nicely demonstrated when there is a tuberculous peritonitis. The reaction may be so severe as to cause necrosis, producing a tendency to demarcation and sloughing off of the tuberculous tissue. In the human this reaction of the tissues is evidenced in tuberculosis of the lungs by increased cough, rales, sputum and accelerated respiration. The action of tuberculin then is one on the tissues containing the tubercle bacilli rather than on the bacilli themselves.

The general reaction in man is usually evidenced by weakness, pains in the joints, chills with subsequent fever and sometimes vomiting. The reaction may be severe, making the individual quite ill. In the tuberculous guinea pig the tuberculin injection is followed by sluggishness and death. The rise in temperature is not much relied on in guinea pig reactions.

Both the local and general reactions depend on two factors—susceptibility and the amount of tuberculin given. Of these two factors the degree of hypersensitization is entirely unknown and is what is being tested for. The amount of tuberculin used in the test, however, can be regulated. The determination of the quantity of tuberculin injected is of great importance inasmuch as the reactions and disturbances at times are so severe that tuberculin has been given credit for causing new foci of tuberculosis. To avoid these severe reactions, small doses of tuberculin are used at first, then gradually increased, the principle of the best methods now known being to give the least amount that will give definite information as to the presence or absence of tuberculosis. In all tests for the purposes of diagnosis, the temperature of the patient is taken from 24 to 48 hours. If the temperature fluctuates, it can nearly always be brought to normal by putting the patient to bed. After the temperature is normal, or nearly so, a small dose of tuberculin, in some clinics 0.2 milligram of old tuberculin is injected subcutaneously and

the temperature is taken at regular two hour intervals for 48 hours. If there is no temperature reaction, then four days after the first injection 0.5 milligram is given and again the temperature recorded. If there still is no reaction, the amount injected is raised to 1.0, 3.0 and ultimately to 5.0 milligrams. If no reaction results from any of the injections, the patient is regarded as being free from tuberculosis.

When the test is applied in some such manner as is here indicated, no markedly uncomfortable results are encountered, and the test is of much diagnostic importance, being definite in over 95 per cent. of the cases of tuberculosis.

The old tuberculin of Koch has not been the only tuberculin that has been used to diagnose tuberculosis, various other so-called tuberculins having been prepared. Some of these have attracted a considerable amount of attention and have been used in the different clinics with varying results. In the last year, however, certain modifications of the administration of tuberculin have become very prominent.

Cutaneous Reaction of von Pirquet. The methods of von Pirquet were first published in the spring of 1907. He found, if he placed a drop of Koch's old tuberculin on the skin of a tuberculous individual, then scarified the skin and allowed the tuberculin to enter the tissues, that at this point a bright red, later dark red, papule would appear. This reaction he found at times to last as long as eight days. The reaction, he observed, came out best in cases of skin and gland tuberculosis, especially is this true in children, under one year of age. Pirquet concluded from his investigation that the test is positive for the diagnosis of tuberculosis.

Engel and Bauer from investigations on nursing children obtained at times a positive skin reaction when at autopsy no signs of tuberculosis could be found. The reaction they found was at times very severe and gave the best results in children between the ages of three and fourteen.

Wolff-Eisner and Teichman have made efforts to differentiate between the different stages of tuberculosis by the appearance and degree of the skin reaction.

The test has been tried on animals, especially on cattle, horses and guinea pigs by Vallee, and he believes the reaction to be of diagnostic value in tuberculosis. Dr. Luckey, the state veterinarian, has used the method on cattle and has obtained very satisfactory results.

Dr. Warfield, who has used this method of diagnosis in a considerable number of individuals, concludes that the reaction is harmless; and that it always appears when there is an active tuberculosis but that a positive reaction need not indicate an active process in as much as it occurs in healed tuberculosis.

At the present time, the test does not give definite information and more experimental work is necessary before the test can be used for definite diagnosis. Because of the safety of the method, it might well be used when it is to be followed later by the other methods of diagnosis; especially is this true when the reaction is positive.

Ocular Reaction of Calmette. In 1891 Koch, in giving further information concerning his tuberculin, stated that the active part is a substance that is insoluble in absolute alcohol and that it probably is a derivative of albumin, but not a tox-albumin inasmuch as it can be heated to the boiling point, and passes rapidly through the membrane of the dialyzer.

Calmette, in 1907, reported investigations on the reaction that occurs in the eyes of tuberculous individuals, when tuberculin is dropped into the conjunctival sac. Inasmuch as glycerine, of which the old tuberculin contains 50%, causes irritation of the conjunctiva, Calmette prepared a glycerine-free tuberculin by precipitating out with alcohol the active principle of tuberculin. The alcohol precipitate is soluble in water. Calmette observed that when several drops of a 1% aqueous solution were placed into the conjunctival sac of the eye of a tuberculous patient, there followed several hours after the instillation, a marked congestion of the palpebral conjunctiva, a swelling and redness of the caruncle, and a fibrinous discharge. This reaction reached its maximum about ten hours after instillation and disappeared in from 18 to 36 hours.

This means of diagnosis of tuberculosis at once attracted much attention and now reports have come from many clinics concerning its value. Some of the reports favor this method for the diagnosis of tuberculosis, while in some clinics unpleasant complications have been observed. The complications in some cases have persisted for some time and have been observed principally in eyes that were defective before the instillation of the tuberculin. At the present time there certainly are some objections to the clinical application of the test. The two chief objections are dependent on its value as a means of diagnosis and the complications that may arise in the eye as a result of the test.

Levy reports 85 per cent. of positive diagnosis in 41 tuberculous patients. The percentage of efficiency in diagnosis in other clinics is not much better than in the cases Levy reports.

Earlier I have pointed out that the reaction from the subcutaneous injection of tuberculin depends on the hypersusceptibility of the individual and the amount of tuberculin injected, and also that in making the diagnosis by means of tuberculin, the smallest amount of tuberculin that will give the diagnosis is used. This is done so as to avoid severe reactions. These same principles must apply in all tests based on hypersensitization. Most investigators have lost sight of these facts in the application of Calmette's tuberculin, the method usually employed being to instill from one to several drops of a 1% solution of Calmette's tuberculin. The number of drops put into the conjunctival sac is of no importance for the sac will hold only about one drop. It is thus evident that the difference in hypersensitization has not been taken into consideration. When the same amount of tuberculin is given to all hypersensitive individuals, the reactions obtained may be broadly divided into three groups: *a,* the group in which the hypersensitization is such that

the reaction is definite and not too marked; most cases will probably fall into this group; *b,* the group in which the hypersensitization is too low to give a reaction;—to this group belong the cases that account for the failures to get the reaction in tuberculous individuals; *c,* the group in which the hypersensitization is very marked; to this group belong the cases in which marked and persistent irritations and defects of the eye occur.

Wiens and Guenther found that they frequently had patients belonging to this last group. The conjunctivitis in these cases lasted for months. To avoid these marked reactions, they tried a one-half per cent. solution and got none of the irritations of the conjunctiva. If this is done, however, it must be evident that the second group of cases must be larger and that fewer cases of tuberculosis will be diagnosed by the ocular reaction.

To avoid too marked and persistent reactions and to get the reaction of hypersensitization in all cases of tuberculosis, in different clinics, first weak than strong solutions are used for instillation into the eye. Rosenau and Anderson, however, have found that re-instillation is open to certain objections. They found that twelve apparently healthy males on the first instillations gave no eye reaction when, however, these same twelve men fifty-one days later received the same amount of tuberculin; ten of them showed definitely positive reactions. These investigators point out that in these experiments there is proof of sensitization to Calmette's tuberculin which is not due to tuberculosis but due to the instillation of tuberculin. This sensitization may not be present early after the instillation, may be present only in the eye instilled, but it may possibly also be present in the other eye. This may preclude the instillation of varying strengths of Calmette's tuberculin for if we take into consideration the difference in hypersensitization and try to give varying concentrations of Calmette's tuberculin, we must also take into consideration the sensitization produced by the tuberculin itself. Even if the sensitization due to tuberculin instillation is limited to the tested eye, yet at times three instillations will be necessary and then one eye must be twice tried. It seems quite evident that the result of second instillation into an eye must be regarded with suspicion.

The work on the use of Calmette's tuberculin is still in the experimental stage, and at times persistent and severe complications arise. Because of this it would seem that at present, there is not sufficient justification in using it in the human eye; but instead the subject ought to be investigated in the eyes of animals.

This has been done by various investigators and generally unsatisfactory results have been obtained. Campbell and White have tried Calmette's tuberculin on tuberculous cattle and have found that the 1% solution produces no reaction in these animals. Similar results have been obtained by Dr. Luckey, who used some of my Calmette's tuberculin, made from bovine tuberculin. The crude tuberculin as it is sent out by

the Bureau of Animal Industry of the Department of Agriculture, has however, given very satisfactory results when used for the ocular test. Instillation of crude tuberculin even in the eye of a healthy individual, will produce inflammation due to the glycerine in this preparation; however, the conjunctiva of cattle apparently is not as easily irritated by glycerine, and the instillation of the crude tuberculin is followed by a reaction only when the animal is tuberculous.

Dr. Noyes and I have tested the hypersensitization in healthy and tuberculous guinea pigs and rabbits. Our results so far indicate that the laboratory animals may well be used to gather information concerning Calmette's ocular reaction as a means of diagnosis of tuberculosis. This would certainly seem advisable before it is used in the human eye.

Due to the uncertainty of the results of both the cutaneous and ocular tests for the diagnosis of tuberculosis, the lack of information on the value and safety of at least one of these methods of diagnosis, the subcutaneous injection of tuberculin will probably be more just to patients and to the doctor. Investigation, preferably in animals, ought, however, to be undertaken on both the cutaneous and ocular tests.

Treatment of Tuberculosis with Tuberculin. It was in the hope of finding a cure for tuberculosis that lead to the discovery of tuberculin. Since that time, Koch has made his TO, TR and tubercle bacillus emulsion. Denys has made a tuberculin similar to the old tuberculin, differing from it only in that it is sterilized by filtration rather than by heating. Numerous other tuberculins have been made and used in the treatment of tuberculosis. It was early discovered that the tuberculins do not directly cause the death of tubercle bacilli, but are curative only because of the action on the tissues containing tubercle bacilli. The tuberculins hasten the healing processes when given in the proper amounts and at the proper time.

The results obtained in the treatment of tuberculosis with tuberculin have varied and for a time this method of treatment was suspended almost entirely. In recent years, however, tuberculin has again become of more importance in treatment. It is now recognized that the maximum dose that will be tolerated is not to be given, but that there is an optimum dose which produces only a slight reaction without general symptoms. When such a dose is given, there is merely a congestion of hyperemia at the sight of the lesions. As a result of the congestion and hyperemia there is an increase in the number of leucocytes and increased amount of immune body and of normal serum in the part involved, all of which are of importance in combating infection.

The doses and kind of tuberculin that are given vary in the different clinics. The treatment that I have seen the best results with begins with an injection of 0.001 milligram of old tuberculin. The injections are increased slowly in amount and a considerable number of injections are necessary so that at times the treatment extends over months. If there is an increased or subnormal temperature, loss of appetite, sleep-

lessness, increased cough and sputum, local pain or inflammation, the amounts injected are decreased.

Tuberculin treatment is applicable only in beginning and in uncomplicated tuberculosis. Marked fever, heart lesions, hemoptysis or marked emaciation are usually regarded as contra-indicating tuberculin treatment. The cases of tuberculosis of the bones, glands and skin respond especially well to the treatment. In all cases, however, the treatment with tuberculin ought to be well regulated and supplemented by all of the treatment generally given to patients having tuberculosis.

Summary. The demonstration of the presence of tubercle bacilli is the only definite, positive diagnosis of tuberculosis. It often is difficult to demonstrate or find tubercle bacilli in the material available for examination. Realizing this difficulty the clinician must give to the bacteriologist every assistance possible, and the bacteriologist must do more than examine the ordinary bacteriological slide. Frequently the demonstration of the tubercle bacillus requires modification of the material, centrifugalization, sedimentation, and animal inoculation.

When the tubercle bacillus cannot be demonstrated in the material available, tuberculosis can in many cases be diagnosed by means of tuberculin. The reaction obtained with tuberculin depends on hypersusceptibility due to effects produced by the tubercle bacillus. This hypersusceptibility varies in different tuberculous individuals, and the reaction obtained by the use of tuberculin varies with the degree of hypersusceptibility and the amount of tuberculin used.

To avoid severe reactions, the smallest amount of tuberculin that will give a definite diagnostic reaction ought to be used. Because of this usually very small amounts are first used and then increased up to certain amounts, until the case is diagnosed as being tuberculosis or not.

Tuberculin is administered in different ways for diagnostic purposes. The subcutaneous injection method is the one concerning which most is known. Newer methods, especially those giving cutaneous and ocular reactions are not at present of as much diagnostic value, and experimental work is necessary before these methods can be applied with as much safety to the patient and be of as much diagnostic value as are the subcutaneous injection methods. Experimental work can be done on the laboratory animals and at present it would seem as if this is advisable.

The different tuberculins, when given in proper amounts and at the proper intervals are of curative value in certain cases and forms of tuberculosis.

THE CARE OF THE CONSUMPTIVE.*

BY EDWARD W. SCHAUFFLER, M. D., KANSAS CITY, MO.

I would never have ventured, on my own initiative, to present to you on this occasion a paper with the above title. But when requested—I may almost say instructed—to do so by the commander-in-chief of the anti-tuberculosis campaign in Missouri, our friend, Dr. William Porter, I dared not refuse. The best I can do for you therefore is to handle the subject briefly.

By the care of the consumptive we mean the measures that should be taken for his comfort, for his cure, and for preventing him from being a source of infection to those about him. This care must be exercised partly by the enforcement of certain regulations by public authorities, municipal, State, or national, and partly by the voluntary action of the patient and of his friends.

The recent growth of public opinion in favor of the control of tuberculosis by legislation and the enforcement of laws bearing on this point is very marked. A few years ago even the doctors were somewhat doubtful as to the wisdom of attempting the registration of tubercular cases, fearing that the community would resent this as an impertinence and as a means of making still more intolerable the lot of those who were already sufficiently burdened with their malady. This fear has proved to be unfounded, and in many cities and some States laws for the registration of the tubercular, with provision for their care, for the protection of those who must be in contact with them, and for the disinfection of rooms or houses in which such patients have died, are being carried into effect without in any way interfering with the comfort or happiness of the sick. The latest and one of the most complete legislative acts in this line has just been passed by the legislature of the State of New York, the provisions of which are thus summarized in *Charities and the Commons,* for May 9, 1908:

> Tuberculosis is declared to be an infectious and communicable disease, dangerous to the public health. It is made the duty of every physician to report to the local health authorities all persons known by him to have tuberculosis. A similar duty is imposed upon the chief officers of hospitals, dispensaries and similar institutions. Local health authorities are required to provide for the free examination of sputum, upon the request of any physician. The register of persons having tuberculosis is protected from publicity. Premises vacated by the death or removal therefrom of a person having tuber-

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culosis must be reported to the local health authorities and must not be occupied until properly disinfected. Health officers must visit such apartments or premises, and determine the manner in which they shall be disinfected, cleansed or renovated. Disinfection must be done by the health authorities at public expense. Cleansing and renovation shall be done by the owner, at his expense, in accordance with the instructions of the health authorities. In case such orders are not complied with, the health officer may post a suitable placard, preventing the re-occupation of the premises. The health authorities may, upon the complaint of any person, after an investigation thereof, serve notice upon any person having tuberculosis who disposes of his sputum in such a manner as to cause offense or danger to others, requiring him to dispose of his sputum in such a manner as to remove all reasonable cause of offense or danger. The violation of such an order is a misdemeanor. Health officers must send to physicians reporting cases of tuberculosis a printed statement and report, approved by the state commissioner of health, enumerating such procedures and precautions as are necessary to be taken on the premises of a tuberculosis patient for the protection of other persons occupying the same premises. Physicians may either carry into effect such procedures and precautions, for which they shall receive the fee of $1, or, if unwilling or unable to take such steps, shall so certify to the health authorities and the duty shall thereupon devolve upon the health authorities, who for the performance thereof shall receive a similar sum. Health authorities shall also send to physicians a printed requisition, enumerating the supplies and materials kept on hand by them for the prevention of the spread of tuberculosis, and shall so far as possible fill the requisitions of physicians for such materials, including circulars of information concerning the treatment of the disease and the precautions to be taken to prevent its spread to others. A penalty of not to exceed $100 is imposed for false reports. For other violations of the act, a penalty of not less than five nor more than fifty dollars is imposed. Upon the recovery of a patient, this fact must be reported by the attending physician, and the name shall thereupon be removed from the register.

Many of these requirements have already been carried into effect in the city of New York under municipal laws without working any hardship on the people and with no opposition on their part. I am sure we shall all agree that this is the sort of legislation we need in the State of Missouri and that it is our bounden duty as intelligent physicians to work for the securing of such legislation by every means in our power.

Another duty devolving upon States and municipalities is for the establishment and maintenance by the cities of free dispensaries for the treatment of tubercular patients, and, by both cities and the State, of hospitals and sanatoria for the reception of such cases, both those that are incipient and the more advanced. It will never be possible to reach all cases of pulmonary tuberculosis in this way, but the effort should be made to reach as many as possible, not only for their own good, but for the protection of the community. Many of our Eastern States are multiplying this sort of institution with commendable activity. And yet, even in those parts of the country where the most progress has

been made, the supply is pitiably small as compared to the demand. In Polk's Directory of Physicians of the United States for 1906 there is a list of 420 hospitals and sanitariums in the State of New York. Among these are *ten* for tuberculosis, one State Hospital for Incipient Tuberculosis, two municipal hospitals belonging to the City of New York, and seven private hospitals or sanitaria, three of which are free, the others being for pay patients only.

In the State of Missouri there are, so far as I know, only two institutions of this kind—the Mount St. Rose Throat and Chest Hospital, St. Louis, and our State Sanatorium for Incipient Tuberculosis at Mt. Vernon, while Polk's Directory gives a list of 138 Hospitals and Sanitaria in the State. Is there not enough left for us to do, enough especially for you young men who have the immediate future of our great State in your hands?

In every city or larger town there ought to be dispensaries established for the free examination and treatment of all suspected tubercular cases that may seek their aid. Here careful diagnosis should be made and intelligent treatment be given; above all instruction should be given, simple, earnest and oft repeated, to the consumptive and to his friends, whereby they shall be taught the simple but inexorable rules that must be observed for the cure of the sick and the preservation of the well. Printed instructions, brief and plain, on the above topics should be furnished at cost by our State Society for the Prevention of Tuberculosis, for free but judicious distribution at all such dispensaries and by all local societies. In order that our State society may be able to do this, however, we must, first of all, support that society financially. Every city of any considerable size should maintain its own tuberculosis hospital, where many may be cured and some may be kindly cared for till life ends. This will still leave enough for the State at large to do for its smaller towns and its rural communities in the way of tuberculosis hospitals and sanatoria.

The good work that is being done by your State sanatorium at Mt. Vernon is just beginning to be known. There has not been time enough since its opening for the accomplishment of much in the way of cures. But people here and there in the State are beginning to learn how well off their friends are at Mt. Vernon, how contented they are, and how much they are improving, and there will soon arise such a demand, from all parts of the State, for more provision of this sort as will compel the men at Jefferson City to heed the call. All honor to the few faithful, self-sacrificing enthusiasts among our own number by whose persistent efforts this noble work in our commonwealth was inaugurated!

Coming now to the care of the individual consumptive we find that the same simple rules hold good whether such patient is to be treated in a sanatorium or at home. There are five cardinal principles to be observed. We count them upon the fingers of one hand.

1st. The proper disinfection of sputa.

2nd. Out-door air, day and night.

3rd. Forced feeding.

4th. Rest during the existence of fever, and the careful regulation of exercise at all times.

5th. Supervision by a physician.

We will waste no time on the disposition of sputa, information on this subject being now so widely disseminated. Only, besides instructions as to the care of what is spit out, caution your patient likewise against swallowing his sputum. At this point, also, let me speak a word of warning against permitting the community to get into a needless panic with regard to the danger from the proximity of the consumptive. With proper precautions on the part of the invalid, which need imply no hardship, as well as on the part of those about him, this danger may be reduced to such a minimum as not to be worth taking into account. And yet we know of health resorts that have chronic hysterics on the subject, and I have known people who objected to going into camp in the wilds of Colorado or New Mexico for fear of meeting consumptives there! Both are equally absurd.

The second requirement, really the first for the good of the patient, is *out-door air, day and night.* Do you say this is impracticable? You are mistaken. If you are as thoroughly convinced as you ought to be of the absolute necessity of this for the accomplishment of a cure, you will be able to convince your patient of the same, and together, you and he or she will be able to bring it about. Sleeping out of doors is even more important than being out during the day, and it is more easily accomplished. To sleep in a room with the windows all open, unless you have windows on four sides, is not as effective as sleeping on a piazza or in a tent, with the ends and sides partly open. For remember that a closed tent may give you as bad air as a closed room. I imagine that it may be more difficult to persuade country people to sleep out of doors than town folks, for I have never occupied closer, stuffier, more objectionable bed rooms anywhere than I sometimes have in a farm house, with windows that could not be raised by any power I could exert. In Kansas City I have had quite a number of people—delicate women as well as men—sleeping out of doors summer and winter during the past three years, to their great benefit as well as in perfect comfort. After they have tried it for awhile nothing could persuade them to sleep in the house.

The term "forced feeding" has rather an ungracious sound, and it will occur at once to the physician that many consumptives are also suffering from indigestion and cannot tolerate much food. This must be recognized and heeded. It is only meant that patients shall be fed with as much highly nutritive and easily assimilable food, properly prepared, as they can tolerate, and that they shall have food six times a

day instead of three. Cereals, breadstuffs, beef, mutton and fowls, the lighter vegetables and especially an abundance of milk and raw eggs constitute our main dependence for the table. It is surprising how soon the patient who lives out of doors loses his indigestion. We cannot afford to wait till they get hungry but must insist on their taking their prescribed ration at the appointed time, so long as it does not disagree with them. Neither need a moderately elevated temperature, as a rule, forbid pretty liberal feeding.

One of the sad mistakes that was constantly made when the consumptive was merely told to go away to some more favorable climate and to live out of doors was that these people, often with a habitual high temperature, were permitted to take a very undue amount of exercise. They thought it was for their good, poor things, and used up the little strength they had in bicycling, climbing mountains, chopping wood and carrying water in camp, and otherwise putting a harmful strain on their enfeebled lungs and failing hearts. We know better now, and forbid all exertion to the febrile subjects, making them lie still in the open air, rest and be fed, assured that if all goes as we hope it may, the time for exercise, recreation and sports will presently come.

Finally, every consumptive should be under medical supervision, not merely to be seen by the physician once in two or three weeks, but to be constantly watched, advised and guided with regard to the entire routine of life. We have no medicinal cure for consumption, but there are many things about the consumptive that require treatment, sometimes medicinal. The physician who has divorced himself from the old-time practice of cough mixtures and cod-liver oil, of chest protectors and the avoidance of drafts, of croton oil externally and creosote internally as being about all you can do, and who will heartily adopt the principles so briefly outlined above, inspiring his patient with confidence and hope, taking him into partnership in this new and promising campaign against the deadly foe, will win many a battle, the issue of which at first looked hopeless, and gladden his own heart as well as many a home in this broad land.

You will observe that I have said nothing about a change of climate in the treatment of consumption. I still believe all that I ever believed with regard to the advantages of Colorado or New Mexico to the consumptive. But the great majority of our patients cannot avail themselves of these advantages. To our great joy we now know and may tell our people that by the observance of the rules here laid down we can give better promise for the cure of consumption in Missouri to-day than used to be given in Colorado.

PUBLIC EDUCATION AGAINST TUBERCULAR INFECTION.*

BY T. F. LOCKWOOD, M. D., BUTLER, MO.

When called on to take a part in a symposium relative to tuberculosis, I felt inadequate to the task as I feared I could not bring to my command, words and phrases necessary to awaken the minds of the profession and laity as well, to a sense of responsibility in this the world's greatest human devastation. Page after page, volume after volume have been written and published in many languages upon this vital question, and still we have remained helpless in a measure, in eradicating this life-destroying element from our midst. True we have learned much about its nature and its dangerous habitat; we have followed its trail from individual to individual on its death-dealing tour; we have seen one after another in the same household fall victims to the disease, proving beyond a doubt, that it is infectious by direct contact, we see in our every day life its insidious attack upon those unaware of its virulency. All this and more have we seen scientifically and convincingly demonstrated to the profession and in some degree, to the public, and yet the invading army has steadily moved forward until we are face to face with the enemy, fighting against many odds in this deadly conflict. Thousands upon thousands yield up their lives after a hard-fought battle with this demon of death called consumption, therefore, it behooves us as promoters of public health and as members of the Medical Association of the great State of Missouri, to concentrate our energies with the combined forces furnished by philanthropists throughout the State in arresting this awful onslaught of human life. With all that has been said and done in the interest of mankind along this line, there yet remains for something stronger to stimulate us to a quicker conception of the sad situation now confronting us. Is it that we must witness the untimely death of a loved one of our own family, or that of a dear friend, or greater still: must we feel the germ of destruction gnawing at our own vitals before we enlist in the effort to prolong lives of unfortunate beings who are destined to die prematurely unless we go to their early rescue? God in his infinite mercy endowed man with a heart of sympathy for his fellowman when in danger or distress from any cause, and I trust we may be inspired with sufficient power to show wherein we may add strength to the mighty forces necessary to combat this stubborn reality. For years and even centuries, tuberculosis has held sway in our midst, slaying its thousands annually with but little resistance offered whatever. People who were known to have consumption were doomed to die sooner or later as there was no known

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cure for it and those thus afflicted were permitted to mingle continually with family and friends in all the social relations of life as long as life lasted, no precaution taken to prevent infection because of the lamentable fact that the profession at that time did not possess the knowledge it now enjoys relative to its infectious qualities. The belief heretofore prevalent pertaining to many in the same family dying from tuberculosis, is no longer thought to be due to hereditary tendencies but acquired wholly from tubercular environments. Realizing then that it is often contracted and seldom if ever inherited, we should direct our energies toward preventive measures if we hope to obtain marked beneficial results, and to do this successfully we must necessarily educate the public beyond the ordinary trend of life; we must bring about reformation in living in our everyday associations with the public in general; we must endeavor to enforce upon the laity, certain rules and regulations of society heretofore unpracticed if we expect to accomplish the desired end now in view; no sanitary rules that are entirely optional with an unenlightened public will be strictly obeyed, and neither can we hope to enforce rules or laws to the letter even though a penalty be inflicted for disobedience as it is impossible to maintain constant vigilance over those who are a walking menace to public health by carelessly and ignorantly expectorating upon the streets and thoroughfares of our towns and cities to be trampled and triturated beneath the feet, subsequently permeating the air we breathe.

Educate the public to fear and to shun consumption as it would smallpox, yellow fever and other diseases of like character. When apprised of above diseases in our midst, we at once place them under quarantine but we allow a consumptive who is many times more dangerous to the public, roam about at large, indulging in the same social privileges as those in health. When a farmer has a sick hog he immediately isolates it from the healthy ones, but not so with unfortunate consumptives who, under our present social customs are permitted to eat, drink and sleep with friends and relatives, there being no restriction placed upon them whatever, no matter what stage the disease may have attained. These same pitiable individuals are permitted to ride in street cars and railroad coaches where hundreds of people are placed in contact with them for hours, during which time no doubt, they have expectorated many times upon the floor of the car there to dry and later to be liberated in the atmosphere breathed by the occupants. Frequent visits are made by these subjects to the water tank while traveling for a consumptive is always thirsty, made so by the fever accompanying this ailment, and he uses with impunity, the same drinking cup used by the traveling public. This is wrong and should not be permitted, and the medical profession should see that laws are enacted prohibiting this public crime, for it is no less than criminal to allow these sick subjects to deposit the germ of tuberculosis in public places, especially upon drinking cups to become a source of great danger to an unsuspecting

public. There should be provisions made by the State to furnish each subject with drinking cups. Every consumptive should be abundantly supplied with small paper napkins carried on their person to expectorate in and then securely folded and placed in a pocket prepared with a flap and a detachable lining so when filled or soiled the lining with its contents, can be removed and burned, immediately replacing with a fresh one. This would act as a perpetual warning against spitting on the streets and in public places, a detestable practice we have as yet, been unable to restrain. This little sanitary measure would cost the State but a small sum and I am sure it would save the lives of many who are daily exposed by the careless spitting in public by these thoughtless subjects. Let us strive to enforce such regulations and we have done more for mankind than is possible to realize at this instant.

We hail the day with gladness when public schools will have a physician on the faculty to teach the coming generation hygiene in a much broader sense than at present taught. I believe a physician should be appointed by the Governor for each county in the State outside of the larger towns and cities, receiving such remuneration for services as deemed expedient, whose duty it shall be to meet at least once a year with the teachers and educators of the county in institute work, giving such lectures as will best enable the teachers to subsequently impart the knowledge to their pupils relative, not only to tubercular infection, but to all contagious diseases so prevalent with the young. In towns and cities, where ward schools exist, there should be a physician on the faculty with the same duty to discharge as his rural brother except his lectures should be personal and didactic. We must inculcate in the minds of the young the principles by which they are made to see their own danger from association with infected individuals and there is no better plan for doing this than demonstrating medical facts to them along with their training for general knowledge preparatory for other requirements of life. We must teach the young who are more susceptible to learning and more comprehensive of the things taught than the parents who are so hopelessly fixed in their ways as to ignore the light that is shed all about them. Our public schools of to-day are too much of a commercial and financial institution where we teach our children the art of making money much to the detriment of their physical well-being, instead of training them in the art of maintaining longevity. The big, husky football player may learn well how to tackle his opponent in a game with all the improved tactics of an expert athlete, but he may after all this, fall a defeated physical hero at the bidding of the little tubercular bacilli. True a person of strong physique may resist more successfully tubercular infection but many of the strongest fall victims to its aggression.

Much of the public do not believe consumption contagious and hence persist in mingling with its victims at all hazard. This act of indifference alone should be sufficient reason why we should begin at our public

schools to enlighten the doubting world on this vital subject. Reverse the order of things somewhat by teaching the children to teach the parents if need be, that consumption is due to a germ, a micro-organism that lives upon living tissue only, and is capable of transmission from one person to another by domestic relationship. A strange phenomenon indeed, that tubercular bacilli will not work on dead structure: when the subject dies the germ dies also. They must have animal warmth to maintain active propagation. This being true, why not drown them out by flooding their den with pure, cold air? I believe each state in the Union should have a distributing depot for all supplies necessary for the comfort of tubercular patients. This station should be in charge of a competent bacteriologist who is also a physician, whose duty shall be to make microscopic examinations of sputum sent him by physicians throughout the State, and by the patients themselves who are anxious to know the truth concerning their condition. It should also be his duty to distribute supplies to those whom upon examination he finds entitled to such, consisting of paper napkins, pocket depositories for same, antiseptics, disinfectants and literature bearing on tuberculosis, its pathological history simplified, its prevention and its treatment by the latest and best authors. All this to be furnished the patient free. He should become the health guardian of every tubercular subject in the State, keeping a complete record, as far as possible, of every case of consumption in his jurisdiction. He should become a bureau of information relative to tuberculosis for the medical profession in the State and to the inquiring public at large. It shall be the privilege of the bacteriologist to choose such assistance as found necessary to aid him in the work. All this could be done without much expense to the State and I assure you we would be well paid in good results.

We long to see the time in the near future, when tubercular sanitariums will adorn the State in many places. Farms might be beneficial adjuncts to tubercular sanitariums where those in the incipient stage might be allowed to do such work as consistent with their condition, thereby rendering the institution as far as possible, self sustaining. Colonizing tubercular subjects for such time as deemed necessary by the State Bacteriologist would be one way of curtailing the ravages of consumption. To accomplish anything worthy of note in the way of stamping out this pale plague, we must teach the victims to understand they must make many self sacrifices in order to help reach results so much desired at the present time. We must show that our stringency on them is not wholly for the protection of others and that we are not jeopardizing their lives in the least but instead, they would receive personal benefit from such isolation by affording them the best opportunity for recovery. Our aim then is of two-fold purpose. 1st. By isolation under quarantine regulation and under the supervision of a state physician, the patients' interest is maintained and promoted. 2nd. By such isolation we remove a source of public infection, saving the lives

of many who might otherwise fall easy prey to the disease. It is an unpleasant task to make the following statement against these poor, God-pitied unfortunates, but it is true with many nevertheless, that they invariably lose respect for the safety of others, even of their own household. I have seen husband and father cough and expectorate upon the floor of his own home, exposing his wife and children to the vile contagion and his only excuse for this filthy, inhuman act, was that he did not have consumption for some old fossil, called doctor, had felt of his pulse, looked at his tongue and told him so. Gentlemen, you have all seen these cases that Drs. Brown, Smith and Jones said were not consumption. There are many monumental witnesses standing in every cemetery in the land giving visible testimony to such mistakes. Not long ago (if you will pardon me for making the statement) I was treating a young lady for tuberculosis of the lungs. She had a cough with the characteristic expectoration, fever of a continued type, extreme emaciation, anemia, cessation of the menses, night sweats, falling out of the hair and most of all, hemorrhages from the lungs. It was a typical case of acute consumption and needed nothing more than a history of the case to confirm a diagnosis. The patient improved slightly under restorative treatment for about two months, having a return of menses, then she gradually grew worse. Another physician was called in who shunned the idea of consumption. She continued to grow weaker with all the symptoms more marked. A second physician, at the request of the first, was called in consultation. He mutually agreed with the first, that she was suffering from hypertrophy of the heart. Please note the wide contrast between the two ailments. This little patient is now peacefully sleeping in the bosom of kind mother earth. We should be extremely careful with our remarks when dealing with any malignant disease. We had better by far err on the safe side and treat all suspicious cases with the same degree of precaution as we would a well marked case of consumption. We can do our patients no harm by so doing and might save the lives of others who are necessarily exposed by unavoidable circumstances. Policy should not prompt any physician to call consumption by some other name just because the patient and friends are pleased to find the doctor who will avoid the graveyard name consumption. Hypertrophy of the heart sounded sweet in the ears of that poor, dying girl; it held out a false hope to her even to the last moment of her dear life and accomplished nothing. It caused the family to cease their carefulness in destroying the germ-laden spittal and had the patient lived long under this state of affairs I am sure other members of the family would have contracted it. I appeal with sincerity, to the profession to be more conscientious and fair with the afflicted who have entrusted their lives to our keeping, for our reward in store is none too large to boast of. I believe in telling the patients of their true ailment as soon as we are positive beyond question they have tuberculosis. It is well to inform the family or friends of the proba-

bilities in the case even in advance of this if we are the least suspicious, that they may ever be on the alert to protect themselves. Our stronghold is nothing short of preventing tuberculosis rather than in the cure, therefore, we must become better teachers of physiological living. Living should be as much a science as anything else pertaining to our physical and mental attainments. Our present progressive method of living resembles much the gopher-in-the-ground style. Doors and windows, even keyholes in winter, are tightly closed. Pure air is at high premium for those who demand it in our modern homes of to-day. The God-favored families living in log cabins on the sunny-side of the Ozarks, are to be envied for the abundance of health-giving ozone that so freely flows in at the many wide crevices found in these crude huts. The conkshell pink tinging the faces of these happy, home-grown children is truly indicative of well aired blood, giving bloom, beauty and vigor to each individual who thus dwells in the sturdy arms of nature instead of mansions made by man. The beautiful homes of the wealthy, the very pride of our proud nation, are magnificent to behold but more people die prematurely in such abodes than in the cabins in the hills. Our homes, no matter how humble, should have sleeping rooms so arranged that nothing but pure, sweet, unused air would enter them. Build them on the south side of the dwelling where sunshine will bathe the interior during the day and the lazy moon at night, may smile peacefully down on you while the gentle zephyrs sing lullabies while you slumber. Sleep wrapped in nature's embrace if you wish to escape tuberculosis, pneumonia and all other diseases incident to said-to-be "taking cold." Soldiers during the civil war who slept out with nothing but blankets and the canopy of heaven for cover, were practically free from tuberculosis and other diseases of the respiratory organs. For four long years they were subjected to such hardships and many of them can testify to-day that few if any, fell victims to consumption. My dear fellow practitioners, why have we failed in these forty years or more, to learn a lesson from this practical demonstration? Not until the great avalanche of human destruction had swept us almost off of our feet did we open our eyes and take notice of the things responsible for our present predicament. If soldiers could thus live and remain healthy, what health we could maintain, by living a similar life systematically.

Let us forever impress upon the intelligence of the public that higher forms of life, both animal and vegetable, depend upon light and air for existence, and it is the lower forms of creation that thrive best in shady places where air and sunshine are wanting. Snakes, scorpions, vermin and all creeping creatures seek such habitation and the lower down the scale of life you travel the more augmented becomes this law of creation and at the very bottom are to be found all the microorganisms the chief promoters of human affliction.

In conclusion let me impress upon your minds that all the essays, all the lectures read and delivered before this or any other medical body, will

aid but little in this grand crusade against tuberculosis if we do not send out missionaries as it were, among the multitude, teaching the word of wisdom to the unwise that they may see the error of their way of living and flee from the danger that surrounds them in everyday life. We must enlist the public into service by joining in one universal effort to suppress this mighty calamity that so defyingly threatens a complete devastation of our nation.

By way of reiteration, let me say, that public education relative to tuberculosis in all its pathological phases, is the most feasible means by which to arrest the ravages of this human curse that so freely invites our attention at this time. So let us proclaim to the world now, henceforth and all the time, the promulgated facts as fast as found in medical science, that the public may have due notice of such findings and be governed accordingly.

UNIVERSITIES AND COLLEGES AS FACTORS IN THE ANTI-TUBERCULOSIS EDUCATIONAL CAMPAIGN.*

BY W. MCN. MILLER, M. D., COLUMBIA, MO.

You will see from the title that the subject for consideration is a composite one. On analysis it yields: the university as a factor, and the college as a factor, in the educational campaign.

The aim or object, the methods and the organization of these two classes of institutions, are different. The essential function of the college is to educate or to train younger, less mature individuals, to teach them how to work and at the same time to impart to them such knowledge as may be of service to them in after life, irrespective of the special vocations they may take up as a life work. The function of the university is to train maturer, fundamentally educated individuals along special lines, to fit them to perform efficiently the duties of their respectively chosen vocations. The college imparts general information derived from whatever source; the university, special information. The university differs most vitally from the college in that it acquires information first hand, it directs investigation or research whereby knowledge is primarily attained and trains maturer individuals to become investigators.

The province of the college lies within geographical regions well established, that of the university extends to the frontier, into the regions of discovery.

The method of the college is preëminently instructive and general, that of the university, instructive and special, and investigative.

The organization of these two classes of institutions is co-ordinate with their respective aims and methods. That of the college is simple and limited, that of the university diverse and extensive. The college is organized with a limited faculty of instructors having well defined duties; the university, with an association of faculties, each made up of instructors and investigators having diverse interests and duties which are not definitely prescribed, but to a considerable degree determined by the special interest of the individual member. However, it must be noted, that most American universities, as organized, contain a department which is essentially a college, as set forth above, known usually as the academic department, or school of liberal arts, or school of arts and science.

Furthermore, there has developed in America a type of university that includes in its organization certain departments that correspond to the so-called polytechnical schools, in which instruction is given that

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pertains to special trades and industries. The most conspicuous class of universities of this type is that of the State universities. Established by State and nation for their respective benefits and serving the interests of the citizens who virtually constitute State and nation, they will continue to receive their support and will surely develop into the dominant and persistent type of university. Their field of operations will become as varied as are the interests of man, coördinate and coincident with the life of the nation. As an illustrative example of such an institution, we may cite the university of our own State, as now organized with its coördinate schools of arts and science, law, medicine, teaching, engineering, agriculture, domestic science and journalism.

For the reason that in a university of this type, the college is included, we will limit our considerations to the subject: The university as a factor in the educational campaign for the prevention and cure of tuberculosis.

What the college is or should be, as a factor in this campaign, may be inferred easily from what has been stated above in defining its relations to the university.

This campaign of education has taken on a new life and organization only within the last few years and the participation of the universities has been, for the most part, merely incidental. However, it may be noted that the movement has had its beginning in the university and in closely allied institutions, or with men who have been affiliated with university work.

The field of operation of the campaign is common alike to the professions of physician and surgeon, agriculturist and veterinarian, hygienist and sanitarian, sanitary and municipal engineers, sociologist and political economist, architect, teacher and household economist, all of whom are represented by instructors and investigators in the American university. What these representatives may have done contributory to the campaign till now has been incidental, nevertheless it is something done by the university as a factor and constitutes no small portion of what has been and now is being done in the propaganda.

In the domain of tuberculosis, research is carried on with the intent to ascertain by systematic effort, a knowledge of the nature of the disease process as directly or indirectly dependent upon the activity or presence of the parasitic bacillus within the body of the infected organism, and to determine by what process or means the disease may be prevented or counteracted and the organism maintained in a state of health or restored thereto. This implies work in the fields of pathology, bacteriology, chemistry, immunity, therapy and surgery, in the province of human and veterinary medicine.

Research is also carried on to determine the conditions under which the disease is transmitted from one individual to another and from man to the domestic animals and from them to man, and to determine by what means this transmission may be prevented. This implies work in the

fields of bacteriology, food supply, ventilation, house, car and ship construction, school, prison and factory inspection, etc., etc., in the provinces of the hygienist and sanitarian, physician and veterinarian, sanitary and municipal engineer, agriculturist and dairyman, sociologist and political economist, architects, teachers and household economists,—all represented in the faculties of the university.

Research, however, implies and includes correlative publication in reports and in technical journals, whereby the results attained are made available to co-operative workers and contributing to the general fund of knowledge upon the subject, from which may be drawn such information as may be of use in the campaign. A great advantage of conducting research in a university with its organized co-operative departmental system is that the work may be economically co-ordinated to a definite end.

Instruction in the university with respect to tuberculosis may be classified into that which is professional or technical and that which is popular, separated, however, by no sharp line of demarkation. Professional or technical instruction is given to students in human and veterinary medicine and to nurses; to students in municipal, sanitary, railroad and steamship engineering; to students in house, tenement, school, factory, prison and hospital architecture; to students of military science in camp construction and management; to students of sociology and political economy in the many socio-political economic aspects of the problem, such as the financial burden entailed by tuberculosis upon the community, local, state and national police control and relief, parks and play grounds, hospitals, sanitaria, farm colonies and convalescents' homes, food and milk supply, health boards, quarantine and sanitary law; and to students of home economics and teaching in many aspects of the problem, hygienic and sanitary.

While the instruction in tuberculosis is given incidentally along with that of other diseases and in relation to other hygienic and sanitary subjects, it has been and will continue to be, the most important factor in the broad aspects of the educational propaganda. Each of these students, technically informed, will go out into the world and wherever he make his home, he will become a local source of reliable information.

As the physician feels it to be his duty within his province to warn and advise his patients and acquaintances against the danger of the disease, so will each of these, within his circle of influence, do likewise, prompted by the same sense of duty.

Does not this exposition of the function of the university show it to be the main source of information and the chief center of inspiration for the great educational propaganda against tuberculosis?

All this in the past has been done incidentally, but the university should do more. It can participate actively in the specific popular campaign. Being organized, it could do this at little cost and without taking on an excessive burden. It should give elementary courses in personal hygiene and domestic and social sanitation to each student. It should

go beyond its walls and by lecture and demonstration, by bulletin and circular, teach the citizens of its local community and of the State at large. It should co-operate with local and State associations for the prevention of tuberculosis; it should use its influence for sanitary conditions in the college town, at the homes of students, in the State hospitals, reformatories, prisons and county almshouses. This it could do through the established channel of university extension. It should always and in all ways, use its influence to promote the health, conserve the resources and improve the social conditions of the citizen of the State which it serves.

PSEUDOMYXOMA PERITONEI; WITH REPORT OF A CASE.*

BY O. BEVERLY CAMPBELL, M. D., ST. JOSEPH, MO.

This disease was given its name by Werth in 1884. In 1874 Beinlich reported two cases, classifying the process as myxomatous degeneration of the peritoneum.

The name given by Werth, pseudomyxoma peritonei, is now accepted, with however, a somewhat different understanding of its pathology and origin. In reviewing the literature I have found 58 reported cases, making with my own 59 in all.

A study of these cases shows that in every case but one, there existed a multilocular cyst-adenoma of an ovary, which had ruptured, its contents escaping into the peritoneal cavity. That in 9 of the cases reported there were secondary cysts in the omentum, appendix vermiformis, intestine, liver and spleen; that in 50 of the cases no secondary cysts were found. In all of the cases large quantities of pseudomucin was found free in the peritoneal cavity. That a low grade of peritonitis existed in all the cases, the peritoneum being roughened, and grayish in color.

The mortality in the cases reported is about 40 per cent. That is, 58 of the cases were operated upon with 24 deaths and 34 recoveries. One case which died was not operated upon, the nature of the disease being revealed at post-mortem.

The mortality has been variously stated by different observers, at from 40 to 50 per cent.

There is but little literature pertaining to this disease, and in several of the cases reported the microscopic findings were not given. Scheuman, in giving a report of a case and a review of the literature, concludes: That inasmuch as it corresponds histologically accurately with the process of cancer formation, pseudomyxoma peritonei must be regarded as a form of carcinoma.

In reviewing the case reports it is evident that we have two distinct classes of cases, viz.:

(1) Multilocular pseudomucinous cyst-adenoma glandular, in which one or more of the loculi have burst, discharging their contents into the peritoneal cavity, producing an irritative peritonitis, and a large accumulation of pseudomucin in the peritoneal cavity.

(2) In the second class of cases we have added to the above condition, secondary cysts in omentum, intestines, spleen, liver, and pancreas.

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The first class of cases should only be declared malignant, when the microscopic findings demonstrate this to be its nature, or clinically by the later development of secondary cysts.

According to the classification of Pfannensteil, the large majority of cases of cystic tumors of the ovary are pseudomucinous cysts, and are benign.

The color of the pseudomucin will depend to some extent upon the presence of cholesterine and blood, and the specific gravity will depend upon the amount of serum present.

Miss K., 37 years of age, residence, Marysville, Kansas, was admitted to Saint Joseph's Hospital, January 29, 1908. She had always been healthy until about one year ago, when she noticed some pain and discomfort in the lower abdomen. Mother and father living and in good health. Negative history as to tuberculosis and carcinoma. Patient had noticed that her abdomen had been rapidly enlarging for about ten weeks. The abdomen was greatly distended with an accompanying edema of lower extremities.

A bimanual examination revealed a probable ovarian adeno-cystoma. There was seemingly a semi-solid material in the peritoneal cavity. On percussion, the lower two-thirds of the abdomen were dull. Operation, January 30th, assisted by Dr. Bansbach. A four-inch incision was made in the mesial line, extending from near the symphysis pubis toward the umbilicus. It was noted that the peritoneum was thickened. A small opening was made in the peritoneum, when a quantity of pseudomucin at once escaped from the abdominal cavity. The opening in the peritoneum was enlarged to the full length of the wound and about two and one-half gallons of pseudomucin removed. The peritoneum was roughened and grayish in color, a multilocular cyst of the left ovary, weighing about six pounds, was found. The cyst was non-adherent and very thin-walled, and two of the loculi were perforated. The loculi that were not ruptured contained pseudomucin. A small multilocular cyst of the right ovary was also found. These cysts were removed and the peritoneal cavity was freed as much as was possible of the pseudomucin, and the wound closed without drainage. The patient made an uneventful recovery and was discharged from the hospital February 21st.

Microscopic report from Dr. W. L. Kenney: Tissue submitted to me presents, on gross examination, a mass of one gallon, made up of fully a hundred little cyst-like bodies; these are so loosely bound with connective tissue that they continually break in two in one's fingers, allowing great quantities of mucin to escape. At junction points of several of these cysts we selected tissue for microscopic examination. A few irregular, stellate cells were in evidence. These rarely contained more than one nucleus and are to be regarded as mucin cells not presenting any earmarks of malignancy. The connective tissue in the sections was amazingly scarce, but the nuclei were rather large in ratio to the whole cell mass, and did not always seem to conform to an ar-

rangement characteristic of adult tissue. The blood vessels seemed to have walls independently made up. On the whole, the aspect can not be said to be definitely malignant, yet the type of tissue predominating is so akin to embryonic tissue that a development of sarcoma in this class of cases is not surprising. It occurs to me that the extreme fragility of the tissue would make extremely difficult the task of entirely removing every vestige of the growth, and from a small remnant recurrence could happen, as in nasal polyp, and such recurrence need not be regarded as proof of malignancy and would be no bar to another attempt at eradication.

Conclusions: Pseudomyxoma peritonei may or may not be a malignant disease.

In operating, a careful search should be made for implantation cysts.

These must be thoroughly removed, and, as well, all the pseudomucin in the free peritoneal cavity.

The immediate danger in these cases is from sepsis, the pseudomucin furnishing an excellent culture medium for bacteria.

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DISCUSSION.

Dr. Frank Hinchey, St. Louis: While this condition is occasionally found in the female, in the male it is exceedingly rare. One of these cases in the male recently came to post mortem at the St. Louis Skin and Cancer Hospital, and I had an opportunity of witnessing it. Dr. McConnell, State Pathologist, has made a full report of it in a recent number of the "International Clinics." It originated at the appendix and the gelatinous masses had spread over the entire cavity, so that all the viscera were agglutinated, the omentum being remarkably infiltrated. Even the scrotal sack was filled, simulating a large hernia.

We have now at the same hospital a woman with a recurrence of the same condition, whose abdomen is distended to a circumference of 54 inches, causing two ulcerations at the site of the old scar, from which openings we are able to withdraw large quantities of the fluid from time to time, thus greatly relieving her.

Dr. Campbell: I wish to ask Dr. Hinchey whether the case reported in a male was such as to make certain the diagnosis of pseudomyxoma, and not colloid cancer.

Dr. Frank Hinchey: Dr. McConnell is known to all of you as an expert, and from a careful study of the case he made the diagnosis.

Dr. Campbell: I would like to have had access to that report. It might be that some pathologists would take issue with regard to all the conditions being present to prove the classification. I have nothing further to add.

THE COUNTY MEDICAL SOCIETY.

BY WILLIAM FRANCIS MITCHELL, M. D., LANCASTER, MO.

In the United States each state has its medical organization which is comprised of members who belong to their respective county societies. A physician is not now eligible to become a member of the state medical society unless a member of a county society. This is a very interesting matter to not a few who expect thereby to attend the state medical society, while a large number in every state belong to no organization whatever. The question why they thus stand aloof from the active members of the medical profession in this country, as a rule, is that they are selfish, or they feel their incompetence and are too lethargic to take any interest in scientific subjects. No man can now mingle in the society of physicians of the present time without exposing his ignorance or his imbecility, and rather than make an effort by industry in the study of subjects that naturally arise in public discussion in medical meetings, he remains at home and feebly tries to criticize such meetings as organizations that meet solely in their own interest and against the common welfare of mankind! Or, as one did in this community not many years since, seek the columns of the local papers and have everything put in print and represent himself as one of the greatest surgeons in the country. When he had a fifteen dollar puff in one issue of our local paper, I had the third section of article one of the code of ethics published at the same time. He remarked that he did not "care a damn for the profession as long as printer's ink paid him." He now lives in another state and belongs to a county medical society! There is yet another class so well represented by Oliver Wendall Holmes, the Rip Van Winkle doctor, who always since his long sleep has his wife to remind him when the state society meets. The only thing that he does is to swell the number in attendance, and return home to resume his usual place loafing and occupying his mind with matters far distant from the study of scientific subjects. Yet to hear him boastingly explain many things that pertain to medicine, he makes the impression of a very well educated man among the laity.

The county medical society should be more than the stepping stone to gain admission into the state and national associations. It should be the fellowship of medical men in the pursuance of the study of medicine and surgery. It should be the body of men who study the nature and history of contagious diseases, and should use all the means within their power to educate the public how to prevent their spread among the inhabitants of the country; for without being informed they cannot escape the dangers of infection. The people should be educated to avoid the charlatan as they would any other class of confidence men. The county

medical society should hold its meetings regularly, and all its members, if in their power, should attend; and not only attend but also make the endeavor to report their cases and discuss papers with intelligence and fairness, that harmony may exist. No progress is made unless good feeling prevails. It is by the dint of hard study and extensive reading that we expect to improve ourselves. It is by the discussion of subjects that we impress on ourselves and on our confreres the correct and lasting memory of what we have read. It is then learned not to be easily forgotten. In this way a number of diseases are studied and especially the diseases within our range of practice. Certain surgical cases, in many instances in country practice, occur only at long intervals and are liable to catch the surgeon unprepared, as it were, as he has forgotten much of the history and management of such cases, and is perplexed at the time he is called, what to do. If he has had occasion to hear such cases discussed in his county society meeting and has himself discussed the subject, and in order to be as well informed on the subject as others in the meeting, has carefully reread the subject after several authors, he perhaps will not be in as dangerous a position when he assumes charge of a case, as the man who has not had his attention called to the subject nor met such a case in years, if ever. This rivalry to know as much as our fellow practitioners is the kind of rivalry to cultivate. This disposition to understand clearly the history of disease and its treatment, to comprehend clearly what we read in the study of fractures and dislocations, or any other injury, to know the anatomy of the human body and to know the relation which each component part has with the other, or lay the knife aside, is what we need.

The duty of every physician to each other is expressed in the code of ethics in as clear and comprehensive language as need be, and no physician who has the welfare of his profession in his consideration, will object to complying with its requirements, nor should he fail to comprehend its instructions, and be governed by it. This seems to be the complaint of some who either wish to deal unfairly with members of the profession when they choose to do so, or claim the privilege of associating with charlatans, and they should be classed in that category. Dismiss them and let them go with the class to which they normally belong. The practice of medicine and surgery requires all the united energy of the whole profession—all studiously employed in not only learning what is taught by the masters of the art and of the science—but it is our duty to investigate, and it is possible that we may add something from our own research. It is the county medical society whose members are devoted to study, from whose labor there may be expected some advancement in the knowledge and treatment of disease.

The hospitals in our large cities are expected to do, and do, each year, render their reports with their experience and the results of their experience,—not experiments,—which are given us in the journals. We should not be satisfied with their work alone. The environments of pa-

tients in the country are not the same as in the crowded hospitals of the large cities. We have patients on the farm, out in the fresh air of the country, not disturbed by the noise and bustle incident to the city. We have disadvantages to contend with as the inconvenience of less means to treat our patients. We are taxed in our minds to arrange our sick rooms where room may be limited, or to provide in the surgical management of the patients injured. These measures are worthy the attention and should be studied and discussed in our local societies. There is no reason or excuse for the country doctor to be idle, not even if he is sitting in his office anxiously awaiting for business to get better. He has no excuse for hours of idleness. His time can be well employed in preparing his paper for the next monthly meeting, which he is expected to read and defend, yes defend, be able to sustain his treatment of disease and its nature and show conclusively that his paper does not bear any marks of plagiarism, but is a paper expressing his thoughts independently, with a clear manifestation of its originality. No man can have many ideas in his head on any subject, and especially on medical subjects, unless he reads the history of disease and the many dissertations which can be found on any subject pertaining to medicine and surgery. The idea has always prevailed among the leading writers that to discuss with their fellow members the nature and history of disease, giving them all a clearer light on the subject as one light taken into a dark room enables them to see over the room, but several lights brought into this same room enable all to see with more minuteness and bring little things which may be important to know into view. I may say to the young physician in particular if he has within his breast a desire to stand high in the annals of his own time,—and time if leisurely spent cannot be redeemed, —he should join his county medical society. If there is none, he should seek to have one organized and when one is established he should from the very beginning take an active part in its deliberations. What man at this time whose reputation is national or perhaps known all over the civilized globe, that does not belong to his county medical society and began his career in obscurity? He has been industrious and has been employing his time in reading,—he has examined many treatises on disease. His microscope is one of his witnesses. As the days came he continued busy, and far in the night he is still employed. At the county medical society meeting he was one of the members that could intelligently discuss the papers read, and read papers himself. With his trained mind and his strong physical development he continued his work with pleasure till he grew out, I might say, of the village to the city. The young man who builds up the hope that some day he will write his name beneath the names of Samuel D. Gross, E. McDowell or J. Marion Sims on the scroll of fame, need not attempt it unless he begins on the first rung of the ladder, the county medical society. He takes the lessons of research in scientific subjects in his younger days. He becomes a neat, clear, incisive writer at the county medical meeting. Then he

enters, if he has perseverance, into the meetings both state and national. If he entertains an idea of reaching a high altitude in the medical profession he should recall the old hymn of Watts:

> Shall I be carried to the skies on flowery beds of ease,
> Whilst others fought to win the prize and sailed through bloody seas?

While there is a difference in the mentality of individuals, much depends on the habits of study and reflection on the subjects read, and all who succeed will have to work; an active county medical society will be of much aid to all, and, further, it is the right way to keep abreast of the times, not only making better physicians but giving the laity a chance to learn what the profession is doing, in teaching them the character of the charlatan, of the worthlessness of patent medicines, that the good physician is a devoted humanitarian. When I look over the American Medical Directory and see an occasional name of a former friend whose name appears in small letters, I pity him when I think that he does not esteem himself high enough to join his county medical society. If he should ever wake up in his old age and look around him, with his fragmentary knowledge dimmed by the long lethargic life spent in ways foreign to the way of active, dutiful professional men, he will only fold his hands and resign himself to the desuetude of the man who failed to plow or plant for the reason of the cold in the springtime of life, and pass out of existence to be forgotten.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, Chairman. M. B. Clopton, M. C. Shelton.

EDITORIAL

RECOMMENDATIONS OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

The Committee on Public Policy and Legislation met in St. Louis on October 24th and discussed a number of important questions relative to medical legislation. The Committee carefully considered the various suggestions submitted to it and recommends the advocacy of several measures. These are, first, to enlarge the powers of the State Board of Health by clothing that body with authority to subpoena witnesses to appear before it and compel the introduction of documents that may have a bearing upon any case at trial; second, to amend the appeal clause so as to remove all ambiguity; third, to prevent corporations from practicing medicine; fourth, to limit the time in which damage suits against physicians may be filed; fifth, to amend the present law defining prior registration.

All these questions are now being considered by the attorney engaged by the Committee for his consideration as to the best legal manner in which these suggestions might be introduced in the legislature. The Committee believes these five questions are the most important ones for the Association to take up and press at this time. Every member of the Association is urged to communicate with his representative and senator

and ask for the support of all bills introduced by the State Board of Health or the Missouri State Medical Association.

Several other questions were considered by the Committee, namely, an act to provide for the collection of vital and mortuary statistics; second, to divorce the examining board from the State Board of Health; third, to appoint local boards of health, or any law to make the State Board of Health the agent of the State for the dissemination of hygienic and sanitary measures. The first and second of these questions are at present under consideration by the national committee of the American Medical Association, which committee is preparing uniform laws governing these points for adoption in all states; the third question is pending before the State Board of Health. The Committee feels therefore that it should await action by these bodies upon the questions at issue before attempting to bring these matters to the attention of the legislature. The question of preventing corporations from practicing medicine is now being considered by attorneys and a bill to cover this point will be introduced by the Missouri State Dental Association.

In addition to the above mentioned questions the Committee was requested to consider two other propositions, namely, one looking to aid the profession in the collection of one class of bills for professional services, and the other to reimburse physicians for one-half of their professional contributions to charity. Concerning these two questions the Committee is of the opinion that the time is not opportune for the introduction of bills carrying these provisions.

The Missouri State Nurses' Association is endeavoring to secure the passage of a law requiring the registration of graduate nurses and asked the Committee to endorse this movement. The Committee extended its approval of the bill on condition that the educational requirements for entrance to a nurses' training school shall be a common or grammar school course instead of a high school course.

The present law governing prosecutions for criminal abortion is considered to be ample and clear. The Committee believes that it will be unwise to amend this law in any particular until its application has been tested in the courts, and defects, if there are any, judicially announced. An ex-judge of the Supreme Court of Missouri directed and supervised the framing of the law, and the Committee considers that sufficient time has not elapsed since its adoption to judge of its efficacy in its present form.

PROGRESS IN THE FIGHT AGAINST TUBERCULOSIS.

The recent International Congress for the Study of Tuberculosis showed that a wonderful advance had been made during the last decade. In all of the departments the keynote was courage. Three important steps have been made. First of all, and so generally acknowledged that the statement seems a truism, is the fact that tuberculosis is communicable. Following this, the logical conclusion is also accepted that it is preventable. Lastly, clinical evidence has given us the proof that it is curable.

Upon these three fundamental principles rests the superstructure of hospital and sanitarium work, of municipal control, of pure food and pure milk service, of bacteriologic test and differentiation, a better knowledge of pathology in the several stages, and a more exact interpretation of the physical signs. The field of study is so wide that already it is subdivided and special workers are pushing their investigations in many directions.

In the recent discussions and exhibits at Washington, it was generally admitted that our American scientists were well to the front. Smith, Ravenal and Vaughn were at no disadvantage in debate with Koch, Calmette and Landouzy, while our clinicians were on equal footing with the best from abroad. Two thoughts are pressed home to us in reviewing the transactions of this great Congress. First, gratification that our own workers have done so much. Second, a sense of personal responsibility in that so much remains to be done—which we must do.

It is not our purpose here to outline the meeting at Washington, but rather to emphasize the second thought,—that of our responsibility towards the work in our own State. The committee representing Missouri presented to the Congress a booklet entitled "What Missouri is Doing." The record therein showed that we were well in the van and that, while we could not equal some of the eastern states in the intrinsic value of oganized work, we were fully in touch with them in the several features and methods employed.

We ask for the earnest attention of our readers in Missouri as we point out some of the ways in which this great work is being carried on. Helpers are needed, practical, aggressive men with large hearts and brains, to aid in the work of reducing the death-rate of 5,000 annually and the economic loss of $22,000,000 each year in our State, at least one-half. This is no Utopian vision, for it has been done elsewhere.

Our agencies are: 1st, our State and local associations. We have twelve of these and the next year should show twice as many. Here is personal service ready for each physician. Organize a home society

and teach your people by example, precept, lecture and the aid of the press, the easy methods of limitation and the ready ways to early recognition. 2nd, our "Institutions for the Cure of Consumptives." We have two such in Missouri, and both of them are not only objects of the greatest satisfaction to those who know them, but of exceeding value as object lessons to the people of our State. Mt. St. Rose, which cares for patients in all stages, has had a wonderful record. It was opened about six years ago under the care of the Sisters of St. Mary and has received over 1,700 patients. The large building is always full, and an addition is soon to be made which will increase its accommodations to twice the present capacity.

Most of our readers are familiar with the work at Mt. Vernon in the State Sanitarium for Incipient Tuberculosis. It has been open a little over a year and has now nearly eighty incipient cases—all doing well. With the exception of two cases, which were not incipient and were cared for only because it would have been inhuman to have sent them away, there have been no deaths. The record of gain and arrest is not excelled by any institution in the land and our legislators may well be satisfied with this investment of State money for the benefit of its citizens.

Our members can do much to help this most valuable work by asking their representatives to plan liberal things for the furtherance and maintenance of the State Sanitarium for Tuberculosis. The appropriation of $10,000 was all too small and it was feared, in August, that the institution would have to close. Only the good management of the present executive and great care on the part of the board of managers, have prevented this. When it is known that the eighty cases are cared for by the Physician in Charge (who now has also to perform the duties of general superintendent), with only two nurses—one of these acting also as stenographer and the other an ex-patient,—it may be seen how great are the straits now handicapping the work.

Another need is that this and all our eleemosynary institutions be taken out of politics. Those chosen to care for and manage these great hospitals should be men who have learned that he serves his party best who serves his State best. We here promise that our every effort shall be to accomplish this most desirable end and we ask the active help of every member of our profession. It is with great anticipation that we note the promise of our Governor-elect to see that politics are eliminated from the service of our hospitals and asylums.

In a later issue we will speak of needed and accomplished legislation and the work of the St. Louis Municipal Commission on Tuberculosis. The report of the Commission will soon be ready and we hope for some decided and advanced action following its presentation.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

The Medical Association of the Southwest met in Kansas City, October 19, 20, 21, and established itself firmly in the esteem of the medical profession of the Southwest as a body that will exert a powerful influence in the medical history of this section of the country. It was the second annual meeting of this Association, and under the presidency of Dr. T. E. Holland, of Hot Springs, Ark., every element which makes for the success of such gatherings was taken advantage of and utilized to the fullest extent. Over two hundred members were in attendance and all expressed an enthusiastic belief in the future of this new organization.

The set program of papers was well diversified and defections few, while the discussions were animated, intelligent and pointed. A specially interesting feature of the meeting was the attention given to clinical work, and every morning a clinic was held in one of the hospitals. Opportunities were thus afforded to visiting physicians to observe many practical demonstrations in the treatment of various conditions.

We predict for this Association a wide and beneficial influence in medical affairs, for it numbers among its members many who have risen to high eminence in the profession and many others whose work and worth will be an honor to them and to the Society. Kansas City, with its usual disregard of its own affairs when host to distinguished visitors, provided entertaining features which left nothing to be desired. The automobile drive over the boulevards, including the famous Cliff Drive, was one of the most enjoyable events of the meeting.

This Association should receive every possible support from the five states which are represented in its membership, and the journals of these state associations should give space for publication of the papers read at the meetings, in order that the fullest possible publicity of the work of this growing body may be disseminated among the members of these state associations.

The next meeting will be held in San Antonio, Texas. Dr. Jabez N. Jackson, of Kansas City, was elected president, and Dr. F. H. Clark was re-elected secretary.

EDITORIAL NOTES

Dr. C. E. Woody, health commissioner of Springfield, has been making investigations of the plans and methods used in other cities with reference to the inspection of the milk supply. There will be an effort made by the medical profession of Springfield to have an ordinance passed establishing a system of milk inspection in that town.

At the Meeting of the State Board of Health, held in St. Louis October 27th, the Barnes Medical College was approved as a reputable medical college for the present scholastic year, it having installed the necessary laboratories and equipments required by the minimum standard of the Board.

The Missouri State Association of Nurses held a three days' session in Kansas City, October 14, 15 and 16. A feature of the meeting was the adoption of a resolution to push a bill through the next legislature, creating a law to require all graduate nurses to pass an examination before a committee of nurses, and establish a system for registration of graduate nurses.

At the Annual Meeting of the National Association of Retail Druggists, September 14, 1908, resolutions were adopted favoring the establishment of a department of public health at Washington; expressing appreciation of the efforts of the American Medical Association to stimulate an increased demand for U. S. P. and N. F. preparations; an increase in the number of hours in medical colleges devoted to the study of therapeutics; and favoring the passage of laws in all states requiring druggists to make a record of all sales of cocain and eucain, or any of their salts or synthetic substitutes.

The Southwest Missouri Medical Society met in Springfield, October 29 and 30, and disposed of an interesting program of fifteen papers. There was a good attendance of the physicians in that vicinity and a number of invited guests and visitors from other parts of the state. This Society has been in existence for thirty years and is doing much good work in maintaining the interest of its members in the progress of all branches of medicine. Dr. W. P. Patterson, of Springfield, is president, and Dr. H. S. Hill, of Springfield, is secretary.

THE VARIOUS MEDICAL SOCIETIES of St. Louis have been active in endeavoring to secure the passage of a competent milk inspection bill by the municipal assembly. Delegates from the St. Louis Medical Society, the North St. Louis Medical Society, the Medical Society of the City Hospital Alumni, and allied organizations, appeared before the assembly and argued for the passage of the proposed bill. St. Louis is at present without protection against the adulteration of her milk supply, the present law having been pronounced unconstitutional because of conflict with the state law.

Another matter of general public interest in which the medical profession has taken an active part, is the proposal to buy the old Fair Grounds and convert the site into a public park.

THE SOUTHEAST MISSOURI MEDICAL ASSOCIATION met in Jackson for a two days' session on October 29th and 30th. Dr. Hamel, of De Soto, addressed the body, giving a short history of the Association. He stated that the Association was organized in 1873 and has exercised a highly beneficial effect in keeping up the standard of the medical profession in that section of the State. Dr. Hamel also outlined the work which the State Board of Health has done and contemplates doing, and pointed out the benefits that accrue from the intelligent administration of the important functions of that body. Dr. Guthrie McConnell, State Bacteriologist, was present and delivered an interesting address on bacteria; he also demonstrated many interesting tests under the microscope. The meeting was well attended.

THE FOLLOWING ARTICLES have been approved by the Council on Pharmacy and Chemistry:

Tabloid Ergotinine Citrate (Burroughs Wellcome & Co.).

Tabloid Ergotinine Citrate and Strychnine Sulphate (Burroughs Wellcome & Co.).

Tabloid Hypophosphites Compound (Burroughs Wellcome & Co.).

Enule Soap Compound (Burroughs Wellcome & Co.).

Gr. Eff. Caffeine and Potass. Bromide Comp. (H. K. Mulford Co.).

Gr. Eff. Carlsbad Salt (Artificial) (H. K. Mulford Co.).

Gr. Eff. Sodium Sulphate (H. K. Mulford Co.).

Eusemin (Leonard A. Seltzer).

From the former list, Syrup Hydriodic Acid (R. W. Gardner) has been omitted.

PERSONAL AND NEWS NOTES

Dr. W. W. Graves, of St. Louis, has returned from a sojourn of seven weeks in the medical centers of the East.

Dr. F. J. Lutz, who attended the International Surgical Society in Brussels, has returned to St. Louis.

Dr. Alexander E. Horwitz has returned to St. Louis after a trip of several months in Europe. He has offices in the Metropolitan Building.

The Johnson County Medical Society will in future meet once a month. Hitherto meetings were held quarterly.

Dr. J. R. Hallowbusch, Rock Island, Ill., was elected president of the American Association of Railway Surgeons on October 16th. The next meeting will be held in St. Louis in October, 1909.

The Following Medical Staff of St. Luke's Hospital, in Kansas City, was appointed recently: Drs. Virginus W. Gayle, L. G. Taylor, Joseph W. Sherer, David E. Broderick, Herbert C. Anderson, Herman E. Pearse, Ernest F. Robinson, Newton W. McVey, Edward H. Skinner, William W. Stevens, J. D. Griffith, George C. Mosher, Halsey M. Lyle, J. W. Gains, Robert T. Sloan, S. Grover Burdett, and B. F. Fryer.

At the Regular Meeting of the board of control of Levering Hospital, Hannibal, the following assignments were made for the medical staff for the year: Drs. James N. Baskett, Thomas Chowning, Charles E. Paxon, Henry L. Banks, John J. Bourn, Robert H. Goodier, Archie L. Shanks, Richard Schmidt, Elmer E. Waldo, Clifton R. Dudley, Edward H. Bounds, I. E. Hill, W. Cloyd Guss, Ulysses S. Smith, Edward T. Hornback, James S. Howell and I. E. Hill.

The Health Department of St. Louis is endeavoring to secure an ordinance requiring that all second-hand clothing stores, pawnshops, and such like places, be fumigated from time to time. In Kansas City also the health authorities are actively engaged in securing a similar law. Such a law is in effect in all the large cities of the country and St. Louis and Kansas City in this respect are perhaps the only ones in which the health department has no supervisory control over these disease breeding places.

The Southern Surgical and Gynecological Society meets in St. Louis December 15, 16 and 17. Dr. F. W. Parham, of New Orleans, is president and Dr. W. D. Haggard, of Nashville, is secretary. Dr. John Young Brown is chairman of the committee of arrangements. This Association includes an unusual number of distinguished physicians in its membership and at every yearly gathering the proceedings are marked by the high quality of the papers read. We anticipate great pleasure in the privilege of entertaining, at the meeting in December, Drs. Ochsner, Deaver, Price, Bevan, Matas, Cushing, Murphy, Reed, McMurtry, the Mayos, and many others of equal eminence in the profession. Among the members in St. Louis are Drs. Tuholske, Glasgow, Bartlett, Kirchner and Dorsett.

The Medical Societies of St. Louis entertained a number of eminent European and American physicians during the past few weeks. Professor W. von Leube, a noted authority on tuberculosis, was banqueted by the members of the Verein Deutscher Aerzte and the Medical Department of the Washington University. Prof. von Leube delivered a public address on tuberculosis.

Prof. Clemens von Pirquet, famed for his investigations of the cutaneous reaction of tuberculin in children, was the guest of the St. Louis Medical Society and delivered an address at a joint meeting of the Medical Society of the City Hospital Alumni and the St. Louis Medical Society.

Dr. M. G. Mumford, of Harvard University, was entertained by the St. Louis Medical Society on October 29th and addressed the Society on the subject of "Studies in Cancer." He reviewed the history of cancer and pointed out the recent progress that has been made in efforts to control this fateful disease. A feature of the entertainment was a smoker, following the formal address of the evening. A committee of ladies served refreshments and the occasion was made one of general social pleasure.

CHANGES OF ADDRESS.

Dr. E. G. Beers, from 406 W. Walnut St., to 306 S. Campbell, Springfield.

Dr. J. T. Bickel, from Winston to Mountain View.

Dr. F. H. Brunig, from 310 Altman Bldg. to 1331 Penn St., Kansas City, Mo.

Dr. John C. Buckwalter, from 309 Century Bldg., St. Louis, to Union, Miss.

Dr. R. E. Castelaw, from 13th & Woodworth to 30 E. 35th St., Kansas City.

Dr. J. W. Conard, from Sumner to Albany.

Dr. W. M. Cross, from 3600 Troost to 4415 Harrison, Kansas City.

Dr. B. C. Darling, from 621 Commerce Bldg. to 90 State St., Brooklyn, N. Y.

Dr. C. W. Gosney, from 720 Shukert Bldg. to 310 Rialto Bldg., Kansas City.

Dr. Harry S. Hughes, from 1234 Hodiamont to 3714 Connecticut St., St. Louis.

Dr. B. C. Hyde, from 404 Bryant Bldg. to 521 Keith & Perry Bldg., Kansas City.

Dr. P. A. Johnstone, from Shukert Bldg. to 3340 Olive St., Kansas City.
Dr. J. W. Kyger, from 515 E. 31st St. to 3213 Troost, Kansas City.
Dr. T. McLemore, from Nevada, Mo., to Humboldt Bldg., St. Louis.
Dr. A. H. Myerdick, from 1704 N. Grand Ave., to 4112A Lee Ave., St. Louis.
Dr. W. S. Shirk, from Sedalia, Mo., to Kansas City.
Dr. Loren Swaney, from Hickman Mills, Mo., to 4641 Troost, Kansas City.
Dr. T. B. Todd, from Webb City to Adrian.
Dr. Edwin E. Whiteside, from Bellflower to River Aux Vases.
Dr. O. O. Young, from Kansas City to Lee's Summit.

NEW MEMBERS MISSOURI STATE MEDICAL ASSOCIATION.

Atkins, Henry S., City Asylum, St. Louis.
Babcock, Bert W., 3449 Chippewa St., St. Louis.
Barnett, D. E., New Hartford.
Berry, J. M., Webster Groves.
Briggs, Waldo, 2600 Gamble St., St. Louis.
Buck, S. B., Triplett.
Byrnes, R. W., Frankford.
Carley, Harry D., 3419 Bell Ave., St. Louis, Mo.
Casey, S. A., Lebanon, Mo.
Eatherton, J. W., Eureka, Mo.
Engman, Martin F., Humboldt Bldg., St. Louis.
Fair, S. W., Belton.
Fienup, Theodore, 1401 S. Broadway, St. Louis.
Fischel, Washington E., Humboldt Bldg., St. Louis.
Fisher, Amos T., Maryville.
Frisler, J. W., Jackson, Mo.
Gallagher, J. C., Valley Park, Mo.
Ganaway, A. M., Gentryville.
Gehrung, Eugene C., Hotel Beers, St. Louis.
Golland, Michael, 1519 Carr St., St. Louis.
Grady, L. C., Ladue.
Griffin, S. H., Humansville.
Hall, Willis, Humboldt Bldg., St. Louis.
Hampton, Z. M., Centralia, Mo.
Harris, Rufus C., 1303 N. Garrison Ave., St. Louis.
Highbee, Edward H., 416 Metropolitan Bldg., St. Louis.
Horwitz, Maximillian R., 353 Century Bldg., St. Louis.
Jennings, Robert J., R. F. D. No. 17, Windsor.
Jeude, Julius J., 2521 S. Broadway, St. Louis, Mo.
Kouri, Martin F., 1041 S. Taylor Ave., St. Louis.
Kraft, Albert J., Augusta.
Leavy, Charles A., 426 Metropolitan Bldg., St. Louis, Mo.
Lippe, Meyer J., 4321 W. Belle Pl., St. Louis.
Loeb, Clarence, Humboldt Bldg., St. Louis.
Loving, S. R., R. F. D. No. 22, Centaur, Mo.
McConkey, C. M., Lathrop.
McKay, Harvey S., 1810 S. Jefferson Ave., St. Louis.
Merz, Adolph, 3404 Cherokee St., St. Louis.
Missimore, Louis E., 4107 Finney Ave., St. Louis.
Moore, John W., 906 Pine St., St. Louis, Mo.
Mosby, Charles V., 713 Metropolitan Bldg., St. Louis.
Mueller, Vincent J., 823 N. 11th St., St. Louis.
Murray, Samuel A., Holden.
O'Reilley, Robert J., 1107 N. Grand Ave., St. Louis.

Porter, Wood K., Turney.
Porterfield, Elmo P., Humboldt Bldg., St. Louis.
Reece, W. C., Elvins.
Rohlfing, Arthur H., 4321 Hartford St., St. Louis.
Rootes, Geo. F., Tebbetts.
Royston, Grandison D., 1814 Locust St., St. Louis.
Rumbold, Frank M., 450 Century Bldg., St. Louis.
Russler, Jacob J., 2620 S. Jefferson Ave., St. Louis.
Scherck, Henry J. 309 Century Bldg., St. Louis.
Smith, O. A., Farmington.
Straus, Leon, 805 N. Grand Ave., St. Louis.
Stufflebam, Andrew J., Humansville.
Todd, D. Clay, 4115 Finney Ave., St. Louis.
Tucker, C. A., Springfield.
West, W. D., Mindon.
Wolf, Alexander S., 4500 Olive St., St. Louis.

NEW MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION FROM MISSOURI.

Andrews, John, Grant City.
Best, W. W., Bolckow.
Blair, E. G., Kansas City.
Brown, F. H., Billings.
Butler, L. P., St. Louis.
Casey, S. A., Lebanon.
Gebhart, O. C., St. Joseph.
Hayden, J. G., Kansas City.
Hopkins, Ross, St. Louis.
Johnson, W. L., St. Louis.
Mount, R. L., Polo.
Newman, S. E., St. Louis.
Pitts, Barton, St. Joseph.
Sanders, St. Elmo, Kansas City.
Scholz, R. P., St. Louis.

OBITUARY

AMOS H. CAFFEE, M. D.

Dr. Amos H. Caffee, one of the oldest practitioners in southwest Missouri, died at his home in Carthage, on October 24th, aged 74 years. Dr. Caffee was born in Newark, Ohio, in 1834, where he spent his boyhood and early manhood years. He attended medical lectures in Cincinnati, and in 1858 moved to Missouri, locating at Sarcoxie, then a leading town in that section of the State. After practicing at this place for two years, he moved to Carthage, in which town he made his permanent residence. At the outbreak of the Civil War, Dr. Caffee enlisted in the Union army and was appointed first assistant surgeon of the First Arkansas Cavalry. In 1864 he was made surgeon of the 14th Kansas Infantry. At the close of the war he returned to Carthage and took up the active practice of his profession.

Dr. Caffee was one of the proprietors of the first drug store in Jasper County, was one of the organizers of the Central National Bank of Carthage, and was interested in a wholesale drug house in Joplin. He was twice chosen mayor of Carthage and served a term as treasurer of Jasper County. He was a prominent member of the Masons, Elks, and other fraternal organizations. For many years he was an active member of the Jasper County Medical Society.

During his long residence in Carthage, Dr. Caffee commanded the respect, esteem and regard of the entire community. He was a prominent figure in every movement which had for its object the welfare of the community and the improvement of the city. His death is felt to be a loss to the entire community.

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION OF THE MISSOURI STATE BOARD OF HEALTH, MADE OCTOBER 27TH, 1908.

(FROM THE RECORD OF THE MINUTES OF THE BOARD.)

Your committee made the second annual inspection, according to the resolution passed by the Board, of the Barnes Medical College, the College of Physicians and Surgeons of St. Louis, the Ensworth-Central Medical College of St. Joseph, the University Medical College of Kansas City, the Hahnemann Homeopathic Medical College of Kansas City, the Homeopathic Medical College of St. Louis, the American Medical College of St. Louis, the Medical Department of the St. Louis University and the Medical Department of the Washington University.

It is gratifying to your committee to report the very obvious improvement in the lecture schedules, in the laboratory equipment and the clinical facilities which has been brought about by compliance on the part of the medical colleges with the laws of this state as interpreted by this Board.

There are as yet defects to be cured but to all appearances the schools are making determined efforts to compiy with the minimum standard promulgated.

We make the following detailed report:

THE BARNES MEDICAL UNIVERSITY: Number of students matriculated in 1st year, 19; 2nd year, 31; 3rd year, about 38; 4th year, 36; total, 124. Since this committee last inspected the Barnes Medical College, we find that laboratories have been established and equipment installed as is required by our minimum requirements. Daily record is kept of the outdoor, general and special clinics and, according to the record, there have been from the first of September, 1907, up to the last of October, 1908, 10,014 consultations in the clinics.

The obstetric clinic does not furnish opportunities such as are required by our minimum standard. According to the verbal statement of Dr. Rice, the professor of obstetrics, there were at the disposal of his department for clinical instruction during the past year 20 cases of obstetrics to be divided among 80 students. No record was kept of these cases from which to verify the statements made by the teacher.

Your committee recommends that the following communication be sent to the Dean of the Barnes Medical University:

"The committee of the State Board of Health appointed to inspect your medical college made its report to the Board and recommended that the Barnes Medical University be considered a reputable medical college under the law for the present scholastic year, but that its faculty

be notified that improvement is urgently necessary in the department of obstetrics and should be corrected; and that the college be requested to notify the Board what plans it has for doing this."

This report of the committee was adopted by the Board and the secretary instructed to bring it to the attention of the Barnes Medical University.

THE ST. LOUIS COLLEGE OF PHYSICIANS AND SURGEONS: Number of students matriculated in 1st year, 30; 2nd year, 26; 3rd year, 44; 4th year, 57; total, 157. Your committee finds that the apparatus which the college promised to install, and for the installation of which it furnished documentary evidence when your committee last made its report concerning it, has been placed and is in working order.

The clinical opportunities for learning obstetrics during the last year was confined to incomplete records of 21 cases, which were attended by the class.

Your committee recommends that the following communication be sent to the College of Physicians and Surgeons:

"The committee of this Board which has inspected your medical college for the purpose of determining whether it complies with the minimum requirements established by the Board under the law, finds that during the last year 21 cases of obstetrics furnished the clinical material for teaching. This number is not adequate for furnishing proper instruction. The board awaits an answer at an early date concerning the plans which you may have for bringing this department of your medical college up to the minimum standard.

The committee has also reported that the clinical records which this committee had opportunity to inspect did not enable it to arrive at definite conclusions concerning the attendance of patients upon the clinics. The data which are the basis of our conclusions are furnished in summaries by the clinicians.

You are respectfully requested to provide such records as will enable the Board to determine your clinical facilities from them."

THE ENSWORTH-CENTRAL MEDICAL COLLEGE OF ST. JOSEPH: Number of students matriculated in 1st year, 14; 2nd year, 13; 3rd year, 16; 4th year, 26; total 69. Your committee inspected the Ensworth-Central Medical College of St. Joseph and found the laboratory equipment installed, the added clinical opportunities, in the shape of a wing to the adjacent hospital, in operation, and the clinical and obstetric opportunities in conformity with the minimum requirements.

THE KANSAS CITY UNIVERSITY MEDICAL COLLEGE: Number of students matriculated in 1st year, 41; 2nd year, 25; 3rd year, 47; 4th year, 46; total, 159. A thorough inspection of the clinical and laboratory facilities of the University Medical College by your committee shows that

the minimum requirements of this Board have been complied with in all departments except in that of physiology. The laboratory equipment for the freshman class is sufficient, under our minimum requirements, for only one-half the class, and your committee respectfully recommends that the college be notified that either the class should be divided into two sections to be given separate instruction, or else additional equipment be installed.

Your committee recommends that the secretary be instructed to notify the college of this conclusion of the Board and request an official answer at an early date.

THE HAHNEMANN HOMEOPATHIC MEDICAL COLLEGE OF KANSAS CITY: Number of students matriculated in 1st year, 24; 2nd year, 8; 3rd year, 16; 4th year, 15; total 63. The Hahnemann Homeopathic Medical College of Kansas City has installed the laboratory apparatus concerning which defects were pointed out last year and for which the Board has documentary proof, as required by the standard fixed by this Board.

Its clinical opportunities are still deficient and your committee recommends that the secretary be instructed to notify them that provision must be made by them to bring the clinical instruction up to the minimum standard of this Board.

THE ST. LOUIS UNIVERSITY MEDICAL DEPARTMENT: Number of students matriculated in 1st year, 60; 2nd year, 59; 3rd year, 79; 4th year, 47 (4 special); total 245. The St. Louis University Medical Department fully meets the requirements of the law governing the reputability of a medical college.

THE WASHINGTON UNIVERSITY MEDICAL DEPARTMENT: Number of students matriculated in 1st year, 55; 2nd year, 27; 3rd year, 51; 4th year, 49; total 182. The Medical Department of Washington University complies in all respects with the requirements of this Board concerning medical colleges.

THE AMERICAN MEDICAL COLLEGE: Number of students matriculated in 1st year, 7; 2nd year, 7; 3rd year, 7; 4th year, 7; total 28. The American Medical College has the laboratory equipment required by the minimum requirements.

Its obstetric record shows that there were a sufficient number of cases, but the record of their general clinics is very deficient.

We recommend that the school be notified that in future the college must furnish such clinical records as will enable the Board to determine from them the clinical facilities.

THE HOMEOPATHIC MEDICAL COLLEGE OF MISSOURI: Number of students matriculated in 1st year, 2; 2nd year, 3; 3rd year, 5; 4th year, 4; total 14. The Homeopathic Medical College of Missouri is short in the following physiologic apparatus, namely:

There are no tambours, no muscles levers, no time markers, no heart levers and no moist chambers.

In the department of histology there is no apparatus for injecting blood vessels.

The faculty promised this committee to furnish a lecture schedule showing that a graded course is being conducted according to our minimum requirements and to furnish such a plan for making up the lost lecture and laboratory hours since the course of lectures began.

Your committee has also been promised the obstetric and general clinical record.

The committee was instructed to request the Medical Departments of the University of Missouri and of the University of Kansas to furnish to this Board such information as will enable the Board to judge of their reputability.

EXAMINATION QUESTIONS STATE BOARD OF HEALTH OF MISSOURI, JUNE 1, 3, 5, 1908.

ANATOMY.

(1) Give branches and relationship of internal carotid artery.

(2) Mention all structures divided in amputation of thigh at junction of middle and upper third.

(3) Give the anatomy of the uterus.

(4) Give landmarks for locating: a. Appendix Vermiformis. b. Gall bladder.

(5) Describe the wrist joint in detail.

(6) Name and locate the sinuses of the dura-mater.

(7) Name all thigh flexor muscles.

(8) Give minute and gross anatomy of the tongue.

(9) Describe the anterior triangle of the neck, naming contents.

(10) Describe the tibia.

BACTERIOLOGY.

(1) How are bacteria imported into wounds? Give in detail the precautions necessary to prevent their introduction.

(2) Describe some method of sterilization and disinfection. (Not less than 200 words.)

(3) Describe the clinical manifestation of the gonococcus as observed in the female genital tract.

(4) Describe the bacteriology of puerperal infections.

(5) Differentiate between the tubercle and the smegma bacillus.

CHEMISTRY.

(1) Distinguish between organic and inorganic chemistry. (Not less than 100 words.)

(2) Give chemical properties, toxicology and treatment for poisoning by acetic acid.

(3) How do you determine quantity of urea in urine?

(4) Differentiate chemically cow's milk and human milk.

(5) Give tests for morphine, carbolic acid and strychnine.

GYNECOLOGY.

(1) Describe laceration of cervix uteri; giving causes, complications, common results and method of treatment.

(2) Describe endometritis; give treatment.

(3) Differentiate a fibroid tumor from pregnancy.

(4) Differentiate inversion of uterus from uterine polypus. Give treatment of inversion.

(5) Describe carcinoma uteri; give treatment.

OBSTETRICS.

(1) Give advantages, disadvantages and dangers of the use of chloroform in labor.

(2) Give manner of applying forceps and mechanism of delivery in R. O. A. position.

(3) How would you distinguish a foot from a hand presentation. Give management of such cases.

(4) Give symptoms and treatment of threatened abortion.

(5) Define asphyxia neonatorum. Give treatment.

(6) Give method of caring for cord in new born.

(7) Discuss rupture of uterus. Give treatment of same.

(8) Discuss vomiting of pregnancy. Give treatment of same.

(9) Diagnose death of foetus in utero at sixth month.

(10) Describe placental circulation.

PATHOLOGY.

(1) Give pathology of interstitial nephritis.

(2) Give pathology of arthritis deformans.

(3) Discuss the formation of cysts.

(4) Describe the blood changes in chlorosis.

(5) Give pathological findings in tertiary syphilis.

PHYSIOLOGY.

(1) In what organ is lymph most rapidly formed.

(2) Describe the sense of smell.

(3) Describe the liver and give its functions.

(4) Name the digestive ferments and give function of each.

(5) Describe the process of secretion of urine.

(6) Describe the spinal cord and give its function.

(7) Locate and describe the area in brain presiding over speech.

(8) Give the circulation of the blood.

(9) What is the difference between striated and non-striated muscular tissue.

(10) What effect does removal of pancreas always have?

PRACTICE.

(1) Describe Cheyne-Stokes respiration.

(2) How would you differentiate cerebral hemorrhage from opium poisoning.

(3) Give treatment in each condition.

(4) Give chief diagnostic test for malaria.

(5) Give symptoms and treatment of chorea.

(6) Give etiology, symptoms and treatment of cystitis.

(7) How would you differentiate cancer of stomach and gastralgia?

(8) Give diagnostic symptoms and treatment of glaucoma.

(9) Give etiology, symptoms and treatment of cholera infantum.

(10) Write a brief but comprehensive paper on constipation. (Not less than 150 words.)

SURGERY.

(1) Describe in detail the examination and treatment of a scalp wound.

(2) Give the pathology and the treatment of non-infective bursitis of the prepatellar bursa.

(3) Describe spina bifida and its treatment.

(4) Describe the boundaries and the treatment of an ischio rectal abscess.

(5) Describe the symptoms, course and treatment of acute infective lymphangitis.

(6) Give the differential diagnosis between syphilis and carcinoma of the tongue.

(7) What is the pathology and what are the early symptoms of spondylitis?

(8) Give the diagnosis and treatment of carbuncle.

(9) What are the constitutional effects of cold; what is meant by a frost bite; describe its treatment.

(10) What are the symptoms of strangulation in a hernia?

THERAPEUTICS.

(1) In case of fevers, which of the two remedies would you administer, aconite or gelseminum? Give indications for each.

(2) In case of weak heart, why would you give an injection (hypodermically) of strychnine and of what strength?

(3) What are the therapeutical uses of ergot?

(4) Give the physiological and therapeutical action of digitalis.

(5) What is the source and composition, and what are the derivatives of belladonna?

(6) Describe the physiological action upon the different parts of the organism of belladonna.

(7) What is camphor and what are its varieties, preparations and doses?

(8) What is valerian, what are its physiological and therapeutical actions?

(9) What is the physiological and therapeutical action of caffeine?

(10) How would you treat a case of acute alcoholism?

COUNTY SOCIETY NOTES

CALDWELL COUNTY MEDICAL SOCIETY.

The Caldwell County Medical Society met in its fourth quarterly meeting at Braymer, on October 14th. The following members were present: Drs. S. D. Smith, J. O. Wilkerson, B. F. Carr, R. L. Mount, J. A. Waterman, G. W. Goins, C. O. Dewey, W. T. Lindley, W. H. Aplin, Tinsley Brown, C. C. Leeper, C. L. Woolsey, C. B. Woolsey, G. S. Dowell, H. A. Schroeder and Hasbrouk DaLamater; visitors, Dr. J. H. Thompson, of Kansas City, and Dr. Solas Cameron, of St. Louis.

Dr. J. H. Thompson read a paper entitled, "The Ocular Manifestation of Tuberculosis." Dr. W. T. Lindley, of Hamilton, read a paper entitled, "The Non-Surgical Treatment of Endocervicitis." Dr. B. F. Carr, of Polo, read a paper entitled "Suggestion—Its Use and Misuse in the Cure of Disease." Dr. W. T. Lindley made a verbal report of a case of lupus erythematosis, showing a photograph of same.

Under the head of miscellaneous business the issuing of transfer cards by the secretary to Dr. C. M. McConkey to the Clinton County Medical Society, and one to Dr. Hasbrouk DaLamater to Jackson County Medical Society, was approved. Breckenridge was selected as the next place of meeting, on the second Wednesday of January.

The election of officers for the year 1908 resulted as follows: Dr. R. L. Mount, Polo, for president; Dr. W. H. Aplin, Hamilton, vice-president; Dr. Tinsley Brown, Hamilton, secretary and treasurer; Drs. W. T. Lindley, J. A. Waterman and J. O. Wilkerson, censors; Dr. C. O. Dewey was elected delegate to State Medical Association, and Dr. W. T. Lindley essayist. Drs. Goins, Dowell, Mount, Duffie, Smith and Gartside were appointed as essayists for the January meeting.

An open meeting of the society was held at night, at which time Dr. C. O. Dewey, the retiring president, delivered an address on the progress of medicine, after which Dr. Solas Cameron, of St. Louis, delivered an address on sanitation and tuberculosis, which was illustrated by stereopticon views. The open session was followed by a banquet given by the Society, which was participated in by the doctors, their wives and invited guests. This was by far the most interesting meeting our Society has ever held.—Tinsley Brown, M. D., Reporter.

CLINTON COUNTY MEDICAL SOCIETY.

The Clinton County Medical Society met in the courthouse at Plattsburg, October 15.

Upon motion of Dr. McConkey, the society resolved to meet monthly in future. The next meeting will be at Perrin.

Dr. C. M. McConkey read a paper, entitled "A Plea for Better Examination of the Ears and Eyes in General Practice." The paper was practical and well written, giving much food for thought and investigation. Cases were cited in which these organs might become affected. The discussion brought out many points of interest.

Dr. Frank Fulton read a paper on "Proctitis." Taking up the different phases of the disease, he drew upon his experience and cited a case of dilated sphincter that he is now treating. He then spoke of the treatment in a general way and gave his preference for treating different conditions. The discussion was full and interesting.

Dr. P. M. Steckman read a paper on "Meningitis" and after giving a general outline of the disease, reported a few cases. He had noted that a diseased condition of the ovaries and barrenness sometimes followed, and asked other physicians to report whether they had observed similar sequelæ.—P. M. Steckman, M. D., Secretary.

GREENE COUNTY MEDICAL SOCIETY.

MEETING OF OCTOBER 2ND.

The Post Graduate Course: Dr. B. F. Fortner gave an interesting lecture on "Intra-Abdominal Suppuration;" he spoke principally on appendicitis and diseases of the gall bladder.

MEETING OF OCTOBER 9TH.

Dr. C. A. Moore presided at the meeting, the subject for consideration was "Fractures in and About the Elbow Joint." Dr. C. B. Elkins made an interesting talk on the subject and advised a very guarded prognosis; an Esmarch bandage, from the hand up, to reduce the swelling, and usually an anesthetic in correcting the injury or making the diagnosis; passive motion should not be used too soon where there has been a fracture into the joint.

Dr. C. A. Tucker, in discussing the subject, read a carefully prepared paper, and said in part: The diagnosis usually is not very difficult if crepitation is present; it is not easy to retain the fragments in position; the elbow should be fixed with splints at right angle or extreme flexion, but be careful not to compress the brachial blood vessels and nerves; the fleshy part of the arm should crowd the fragments into place and hold them there; there is no danger of ankylosis while the fragments are uniting; passive motion should usually be commenced by the fifteenth day and continued for three or four weeks; if there is much stiffness, we may have to use considerable force in flexing and extending the arm until all signs of ankylosis are gone; pronation and supination should also be looked after; the greatest trouble with fractures about the elbow joint is ankylosis, so passive motion should be commenced early and form an important part of the treatment.

The subject was discussed by Drs. Nixon, Dewey, Cox and Camp.—J. L. Ormsbee, M. D., Secretary.

HOLT COUNTY MEDICAL SOCIETY.

The Holt County Medical Society met in Oregon, October 10th. Those present were Drs. Kaltenbach, Davis and Miller, from Craig; Dr. J. C. Tracy, from Mound City; Drs. Bullock and Chandler, from Forest City, and Drs. Evans, Simmons and Proud, of Oregon. Dr. F. E. Bullock read a paper on "Gunshot Wounds," illustrating the subject with enough ammunition of different kinds to stock an arsenal; this was followed by a general discussion. Dr. J. M. McClannahan, of

Forbes, and Dr. Elmer Kearney, of New Point, were admitted as members of the County and State Associations. The next meeting will be held in Maitland, on the 6th of November, as the Society now meets every two months.

HOWARD COUNTY MEDICAL SOCIETY.

The Howard County Medical Society met at Fayette, November 6th. Those present were Drs. Hume, Wright, Richards, N. E. Smith, C. P. Magee, Thompson and C. W. Watts.

Drs. Wright and Smith presented a case of cancer of pancreas and stomach.

Drs. Smith, Richards and Thompson reported cases of diphtheria. A motion was made and carried that our representatives at Jefferson City work for a law for preserving the vital and mortuary statistics, and that the secretary be requested to so inform them by letter.

Election of officers for 1909 resulted as follows: President, Dr. J. B. Fleet, New Franklin; first vice-president, Dr. U. S. Wright, Sr.; second vice-president, Dr. T. R. Champion; secretary and treasurer, Dr. C. W. Watts; censors, Drs. Thompson, N. E. Smith and Richards; Dr. V. Q. Bohnham was elected member of the house of delegates. Dr. H. K. Givens was retained on the committee of legislation, as his time does not expire until August, 1909. He is to act with the State Committee when so requested. The secretary agreed to serve another year, if the members would be prompt in attendance, and pay up their dues by December 31st, 1909.

The society adjourned to meet the first Friday in December.—C. W. Watts, M. D., Reporter.

JACKSON COUNTY MEDICAL SOCIETY.

MEETING OF SEPTEMBER 23.

The first regular meeting following the summer intermission was held in the new meeting place, the Studio Building, which was built to replace the Pepper Building, destroyed by fire May, 1907, and in which the Society had previously held its meetings.

The evening was devoted entirely to business, the receiving of reports of committees being first on the program.

The carbolic acid ordinance, which had been transferred to the Society for action by the city council, following a talk by Dr. Lapp, alderman of the Seventh ward, met with defeat.

The new Nurses' Directory was discussed, as was also the banquet which was to be held one week hence.

There were present 35 members.

MEETING OF OCTOBER 13TH.

Hon. Chas. A. Riehl, assistant prosecuting attorney, addressed the Society, by invitation, in behalf of Prosecuting Attorney Isaac B. Kimbrell, saying that during Mr. Kimbrell's term of office he had done all within his power to prosecute "medical pretenders" and that in the event of his re-election to said office, he would continue to prosecute all medical fakirs if evidence of law infraction were submitted to him.

The speaker of the evening, Dr. L. E. Sayre, professor of chemistry of the University of Kansas, who for twenty years has served as a member of the Revision Board of the U. S. Pharmacopeia, and who was an active worker in the establishment of the Council on Pharmacy, was introduced. The professor's paper, which will be printed in the JOURNAL, will speak for itself. We hope that every member of the State Association will read it carefully, as it handles a very important subject in a masterly manner. Those speaking to the paper were Drs. V. W. Gayle, A. M. Wilson, E. W. Schauffler, F. W. Rathbone, Scott P. Shild and B. H. Zwart.

The following physicians were elected to membership: Carl C. Conrad, W. E. Messenger, Arthur A. Hobbs, G. C. Hall, Jno. G. Hayden.

MEETING OF OCTOBER 27.

The Society, in the absence of the president, was called to order by Vice-President Franklin E. Murphy. It was the first and only time the president, Dr. C. B. Hardin, was not ready to sound the gavel promptly at the meeting hour. He sent word that afternoon that it would be impossible for him to be present and asked the vice-president to be sure and be on hand; this, however, was not necessary, since during the entire year Dr. Murphy has not missed a single meeting, but has always been on hand to preside if need be and take an active part in all subjects, scientific or otherwise, coming up before the Society.

The meeting being the last one in October, it was devoted exclusively to the presentation of patients, pathological specimens and instruments.

Dr. Wm. Frick presented a case of leukoplakia buccalis. Discussion by Drs. Ernest Robinson, Halsey Lyle, W. L. McBride, G. W. Davis and J. N. Scott.

Dr. J. S. Weber presented a case of brain tumor involving the optic chiasm, which was discussed by B. E. Fryer, L. B. Miller, G. E. Bellows and J. W. Sherer.

Specimens were presented as follows: Dr. W. K. Trimble, (a) kidney from patient dying of metastatic hypernephroma. (b) Ovary from case of ovarian pregnancy. (c) Heart, showing vegetative endocarditis of the mitral and aortic valves. (d) Heart, tuberculous pericarditis with adhesions. (e) Skin (negro), syphilitic keloid of labia, gross and microscopic. (f) Hydatid mole, microscopic section.

Dr. Jos. S. Lichtenberg, (a) secretions from eye showing Morax-Axenfeldt bacilli. (b) Secretions from eye showing Koch-Week's bacilli. Discussion by B. E. Fryer, R. B. Brewster and A. W. McAlester.

Dr. W. W. Stevens presented a simple device for administering anesthetics for mouth and nose operations.

There were 63 members present at this meeting.—E. L. STEWART, M. D., Secretary.

LINN COUNTY MEDICAL ASSOCIATION.

The Linn County Medical Association held a very interesting session in the county clerk's office Tuesday evening. The following members were present: Drs. Lane, Polson, F. W. Burke, Eure, Home, Standly, Morris and Haley. Dr. Haley read a very able paper on "Ulcer of the Cornea." Dr. Ola Putnam sent a very interesting paper

on "Operation at Home of Patient," which was read by the secretary. The paper prepared for this meeting by Dr. J. W. Lane was not read but will be read at the next session which will be held at Meadville.

SCOTT COUNTY MEDICAL SOCIETY.

The Scott County Medical Society met at Benton, October 5th, 1908, with the following members present: Drs. G. S. Cannon, W. E. Harris, H. T. Blackledge, J. A. Milem, H. L. Cline, T. R. Frazer, A. P. Haw, R. A. Sparks, S. J. Wade, T. F. Frazer, Hy. Rodenmeyer, W. H. Wescoat and W. S. Hutton.

The scientific program consisted of a paper, entitled "Chloroform in Obstetrics," by Dr. Milem. Dr. Milem stated that he had used this drug in 1200 cases without bad effects. The discussion following the reading of this paper was general.

Dr. Cannon reported cases of malaria. This was discussed by Dr. T. F. Frazer, who stated that in his experience the comatose and algid forms occurred in chronic cases.

A presentation of a case was made by Dr. T. R. Frazer. This was ascites due to hepatitis, probably of malarial origin.

The presentation of a diaper, by Dr. Hutton, showed brown urine stains, in the center of which was deposited a spot resembling brick dust. The age of the patient was ten days. No microscopical examination was made and the members were undecided as to the nature and cause of deposit; the symptoms were those of hemoglobinuria neonatorum.

The thanks of the Society were extended to the Benton doctors for the hospitality shown the members.

Benton was selected as the permanent place of meeting.

Society adjourned to meet the first Monday in January.—W. S. Hutton, M. D., Secretary.

BOOK REVIEWS

Atlas and Text-Book of Human Anatomy. Volume III., completing the work. By Prof. J. Sobotta, of Wurzburg. Edited, with additions, by J. Playfair McMurrich, A. M., Ph. D., Professor of Anatomy at the University of Toronto, Canada. Quarto of 342 pages, containing 297 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $6.00 net; half morocco, $7.50 net.

This third and last volume of the Atlas includes the remainder of the vascular system and the entire nervous system, together with the organs of special sense. Long years of experience in the dissecting room have led the author to depict the peripheral nerves and blood vessels as the student is accustomed to see them in the cadaver. Consequently in most of the illustrations the arteries and nerves, or arteries, veins and nerves, are shown together in their natural position. This fact has necessitated the reproduction of many of the illustrations in color.

Sobotta's Atlas of Anatomy is to-day one of the most popular text-books of the German student, and the American profession can not fail to be grateful to J. Playfair McMurrich, of the University of Toronto, for his onerous labor in translating this work, and adapting it by numerous important additions to the special needs of the American students.

Gonorrhea, Its Diagnosis and Treatment. By Frederick Baumann, Ph. D., M. D. Fifty-two illustrations in the text. New York and London, D. Appleton & Co., 1908.

This little volume is a concise digest of the diagnosis and treatment of the gonorrheal infections of the lower genito-urinary tract. The writings of Oberländer and Kollmann, according to the statement of the author, have been extensively consulted in the preparation of this useful book.

Syphilis. A Treatise for Practitioners. By Edward L. Keyes, Jr., A. B., M. D., With 69 Illustrations in the text and 9 plates, seven of which are colored. New York and London. D. Appleton and Co., 1908.

This is a practical work, its text based upon the classified cases taken from the private office books covering forty years of continuous work of the author's father, ten years of work in the same field by the writer himself, and some gleanings from the twenty extra years included in Dr. Van Buren's case books,—which had been inherited—making a retrospect of sixty years of practical experience in the treatment of 2,500 cases, of which complete records had been kept. It seems necessary to emphasize this fact in order to appreciate the unusual opportunity offered the author to write a text-book on syphilis which actually covers the subject completely and deals with all the phases and aspects of this complex disease.

The volume must prove of unusual interest and advantage to the practitioner since it is devoted not alone to a thorough consideration of the etiology, diagnosis and therapy of syphilis, but in many chapters elucidates the relation of this dread disease to affections of the nose, eyes, nervous system, and all internal organs. The illustrations and book work are excellent.

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JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume V DECEMBER, 1908. Number 6

ORIGINAL ARTICLES

THE TREATMENT OF VISCERAL PTOSIS BY RESPIRATORY EXERCISES.*

BY CHARLES SHATTINGER, M. D., OF ST. LOUIS, MO.

Sometimes, ptosis of the viscera is an acquired condition consequent upon a cause only occasionally operative. Such cause may be an injury, constriction by corset or waistband, spinal curvature, a tumor, pregnancy, ascites, pericarditis, pleurisy, peritoneal (especially omental) adhesions,[1] emaciation, exhaustion after acute disease, or the weakness and atrophy of the abdominal muscles which disuse sometimes entails from the beginning of middle age.[2] In the great majority of cases, however, ptosis of the viscera is the incidental expression of a constitutional state depending perhaps upon congenital defect,[3] persistence of or reversion to an embryonic type,[4] or individual failure to complete the anatomic evolution demanded by man's erect attitude.[5] Whatever the ultimate etiology, sagging of one or more abdominal viscera has generally been considered the salient feature of the disease.

What are the natural supports of these viscera? Some, in conformity with observations by Scarpa and Hutsche,[6] believe the peritoneal reduplications or so-called ligaments to be alone sufficient to hold the abdominal organs in their places. Most writers (Monteuuis,[7] Wolkow and Delitzin,[8] Schwerdt,[9] Robinson[2-10] and others) declare in favor of the abdominal walls as performing this function. The viscera rest upon each other as layers of balls completely filling a box would do. As long as the walls of the box do not yield, every ball keeps its position and the

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

entire contents are in equilibrium. Within the abdomen, however, the equilibrium is not stationary, but movable. There are only two fixed points—the second, descending or vertical portion of the duodenum, and the segment of the pancreas held in the fork between the celiac axis and the superior mesenteric artery. All others shift with the changing states of emptiness and fullness, the waves of peristalsis, and the ceaseless swing of respiration. In the performance of these movements, the peritoneal folds or so-called ligaments may play the role of guys anchored by the root of the mesentery,* perhaps even of restraining tethers, but only to a trifling extent that of suspensory bands.

Barring exceptional cases of acquired ptosis of the viscera, all others show weakness of the abdominal muscles, often atrophy; stretching of fasciae, and sometimes separation of the recti. A consideration of these anatomic conditions has led very naturally to the widespread adoption of artificial support by plaster straps or a well-fitted binder for the treatment of the derangement. An amelioration of subjective symptoms is unquestionably obtained many times thereby. In isolated instances (Henderson,[11] Le Conte,[12] Einhorn[13]), a return of prolapsed organs to their normal position has been reported as obtained in patients who had worn an abdominal bandage, but who also received other treatment. With these possible exceptions, there is no evidence to indicate that the benefits conferred by external support are the result of an actual raising up of the viscera. On the contrary, there is most direct testimony that such lifting is not accomplished.

In an account of gastroptosis as observed at the Medical Dispensary of the Hospital of the University of Pennsylvania, Steel and Francine[14] state: "In nine of our cases, the stomach was re-examined by inflation after an average interval of fourteen months. During this time, the external support, furnished by an abdominal binder, was constantly applied, and the results of the second examination in each case showed that the stomach was in exactly the same position at the end of the period as it was when the patient first came under observation." In discussing a paper on gastroptosis[15] before the American Medical Association, Türck said: "The abdominal belt does not lift the stomach at all, as has been shown by a careful examination with the gyromele in connection with the x rays." By means of suspensions of bismuth subnitrate, Worden[16] obtained radiographs of the prolapsed stomach. Although in "Case 5, extreme prolapse with dilation, low pylorus and kinking at the pyloric portion, an abdominal support of adhesive plaster relieved the symptoms of poor motility," yet "a picture taken with this support on

*The radix mesenterica is formed by the roots of the celiac axis and the superior mesenteric artery, together with a collection of strong connective tissue coming from the aortic sheath and diaphragmatic crura. Strands of lymphatics and nerves accompany the blood vessels. Extensions radiate into the outer coat of the oesophagus, the gastrophepatic omentum, the mesentery of the small bowel, and the hilum of the kidneys. A fibro-muscular band (musculus suspensorius duodenior muscle of Treitz) passes from one or the other crus of the diaphragm to the junction of duodenum and jejunum.

showed the stomach little, if any, elevated." In an article dealing with the treatment of gastroptosis, Francine[17] remarks: "Often and often, the patient on wearing a belt was relieved of the symptoms of dragging, weight, backache and fatigue, but the stomach while somewhat elevated by the belt still remained as much as an inch or two below the umbilicus."

Since the abdominal bandage does not rectify the descent of the stomach or other organs, to what can be attributed the alleviation which it effects often immediately? The benefit undoubtedly results from a restoration of intra-abdominal pressure in greater or lesser degree. An intact intra-abdominal pressure is of great physiologic moment. Peristalsis must be hindered if the pressure within the hollow viscera fails to be balanced or exceeded by that without. A tendency to dilatation from a purely physical cause will be added to that due to any existing weakness of their walls. The sympathetic ganglia acting under conditions of abnormal pressure will manifest erratic reflexes. The pulsations of the aorta and its larger branches relieved from the usual counterpressure, force themselves upon consciousness by way of nerves dragged into hypersensitiveness. The vitally important relationship of the vast area of sphlanchnic vessels to the rest of the vascular system must suffer derangement of its delicate adjustments if intra-abdominal pressure is permanently low. The flow of venous blood, of lymph and chyle, and bile is also interfered with. The element of lowered intra-abdominal pressure is alone sufficient to account for most of the symptoms of neurasthenia and nutritive failure presented by so many of those afflicted with sphlanchnoptosis. Yet few writers on the subject, seem to appreciate the significance of this condition. Schwerdt[9] reasons that lowered intra-abdominal pressure entails gaseous distention of the stomach and bowels, and makes it more difficult for the gall-bladder, chyle channels and veins to empty themselves. He declares: "To raise intra-abdominal tension is the most important point in the therapy of enteroptosis." Visscher[18] says: "Enteroptosis in any of its forms once established, is perpetuated by the continuance of its essentials: inanition, low intra-abdominal pressure and consequent venous stasis. Türck[15] remarks: "Disturbance of the sphlanchnic circulation is undoubtedly an important factor in the production as well as the result of gastroptosis. * * * The improved condition after the application of the abdominal support is due to the increase in the intra-abdominal pressure overcoming the sphlanchnic congestion." Speaking of low pressure, Van Valzah and Nisbet[19] state: "This is one of the causes of the inefficient peristalsis and of the stasis of the contents of the digestive tube. But persistent low tension means venous and particularly lymph stasis or congestion. This abdominal stagnation is pernicious in its influence on the nutrition of the abdominal and pelvic organs, and on digestion, absorption and assimilation." The foregoing are the only extracts bearing on the topic which the writer has been able to collect.

TO EXERCISE CERTAIN ACCESSORY MUSCLES OF INSPIRATION.

POSITIONS AT END OF EXPIRATION.

1 Drawing Back Shoulders.
a Shoulder Blades Separated.

2 Raising Shoulders.
a Shoulders Dropped.

3 Flexion and Extension of Head.
a Flexion.

b Shoulder Blades Approximated.

POSITIONS AT END OF INSPIRATION.
b Shoulders Raised.

b Extension

Plates by Sanders Engraving Co. Prints by Hoke Engraving Plate Co.

In some aggravated cases of visceral ptosis, particularly where advanced age or atrophy preclude the hope of tissue regeneration, a suitable belt may be an absolute necessity for maintaining something like normal pressure within the abdomen. In more favorable cases, it may serve at times as a useful expedient, affording comfort and temporary protection against further strain. But unless the *natural* abdominal supports are developed by exercise, and the belt laid aside as soon as possible, absence of function will simply increase the weakness that ought to be combated. "Once worn, the patient can rarely give up a belt," exclaims Francine.[20] This is true enough, if the belt be relied upon as a curative, instead of a purely palliative measure.

Now, it is quite common to meet with the advice that the abdominal muscles be strengthened when treating sphlanchnoptosis. The utility of the douche, of massage and electricity for the purpose is usually mentioned. Occasionally, a paragraph may even be devoted to describing a few exercises credited with having this effect. But the advantage of training the abdominal muscles in their most important function appears to have been overlooked entirely. The abdominal muscles are primarily muscles of respiration, their actions in bringing about movements of the trunk being in a certain sense accidental and subsidiary. Their function, moreover, is both inspiratory and expiratory. The part played by them in expiration, especially in deep expiration, is too generally understood to require description; but their role as inspiratory agents, may need some explanation. During the inspiratory descent of the diaphragm, the tension of the abdominal muscles prevents downward displacement of the viscera located in the upper abdomen. Instead, these viscera are pressed laterally against the lower ribs, keeping them from being drawn inward by the contracting diaphragm whose excursions would become much less effective if its costal attachments were not thus fixed. The lower circumference of the thorax is not merely maintained, but actually enlarged. When the resistance of the abdominal muscles is sufficiently strong, the downward pressure of the diaphragm, assisted by the pull of the intercostales externi, intercartilaginei and levatores costarum may literally lift the thorax up and as it were off from the abdominal viscera, producing a pronounced type of thoracic breathing. The muscular wall of the abdomen is completed posteriorly by the quadratus lumborum which might be considered as a continuation backward of the transversalis. With reference to the last rib and the abdominal contents, the quadratus lumborum has the same in- and expiratory function as the other muscles of the abdomen. It is suggestive that Aufrecht[21] found the quadratus lumborum "remarkably yielding and easily indented" when nephroptosis existed, and that "not rarely the right quadratus lumborum can be shown to be more yielding than the left in the far more frequent cases of right-sided nephroptosis."

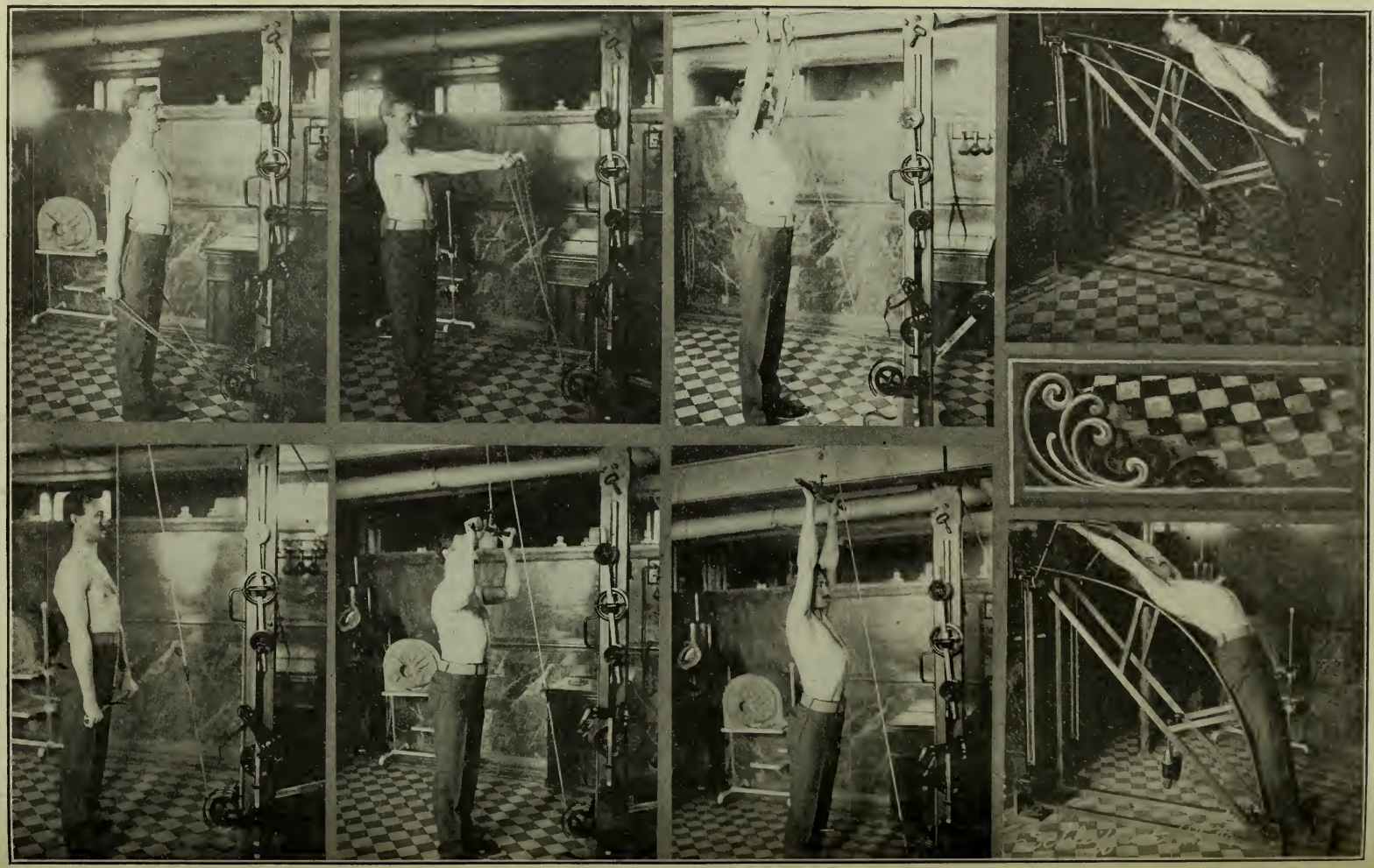
TO ENLARGE AND MOBILIZE THE THORAX.

4

a Position at End of Expiration. *b* Midway. *c* At End of Inspiration.

6

a Position at End of Expiration.



5

a Position at End of Expiration. *b* Midway. *c* At End of Inspiration.

6

b Position at End of Inspiration.

Plates by Sanders Engraving Co. Prints by Hoke Engraving Plate Co.

The foregoing considerations make it apparent that weakness of the supporting apparatus of the abdominal viscera is weakness of a breathing apparatus. This point of view becomes of the greatest practical consequence when the thorax and diaphragm are studied in relation to sphlanchnoptosis. In the constitutional variety of this disease, the thorax deviates markedly from the normal type. The shape is that of the so-called "paralytic thorax," viz., long, narrow, flat and sunken. The intercostal spaces are widened above, but not below. The first pair of ribs is placed obliquely instead of horizontally, frequently even being bent downward at the junction of neck and shaft. The tenth rib nearly always either is attached very loosely to the ninth, or terminates free like the eleventh and twelfth.[3] The lower ribs slant much more than usual. The subcostal or epigastric angle, formed by the costal cartilages of the seventh and eighth ribs with each other, becomes acute instead of approaching a right angle, and may fall to a value of 45° or less. The phrenico-lumbar angle exceeds the normal average of 30° for mid-position of the diaphragm, to attain a value of as high as 90° in extreme instances.[22] Arthur Keith[23] seems to have been the first to assert that "downward displacement of the diaphragm is an essential feature of all cases of ptosis of the viscera." Robinson[2] expresses the same opinion. Keith found also that "in cases of general enteroptosis, the muscular fasciculi of the diaphragm measure on an average only 2½ inches, against 3½ to 4 inches in a condition of health."

To estimate fully the influence such abnormalities must have upon the position of the viscera within the abdominal cavity, it is necessary to keep in mind that the upper part of the latter should occupy about half of the thorax, and that the stomach, spleen, liver and kidneys are firmly attached to the diaphragm. A rational therapy of sphlanchnoptosis demands that attention be not narrowly centered on the abdomen, but be directed toward utilizing the anatomic, physiologic and pathologic facts presented. Accordingly, the treatment of visceral ptosis should include:

1. Development of the abdominal muscles in general, and in the direction of adding to their strength as auxiliary agents of inspiration in particular.
2. Increase of pressure and furtherance of the circulation of blood and lymph within the abdomen.
3. Enlargement of the thorax, especially of its lower half.
4. Development of the diaphragm and elevation of its domes.

This is no easy task. Perseverance is the first requisite. With it and time, even those past the plastic period of life may still achieve satisfactory results. But when age has stiffened the thorax and joints, or when extensive degeneration of muscle and connective tissue has taken place, little can be accomplished of course.

The most difficult part of our therapeutic endeavor will be to lift the domes of the diaphragm. There is at our disposal for this purpose, the upward suction of negative intra-thoracic pressure. This could be

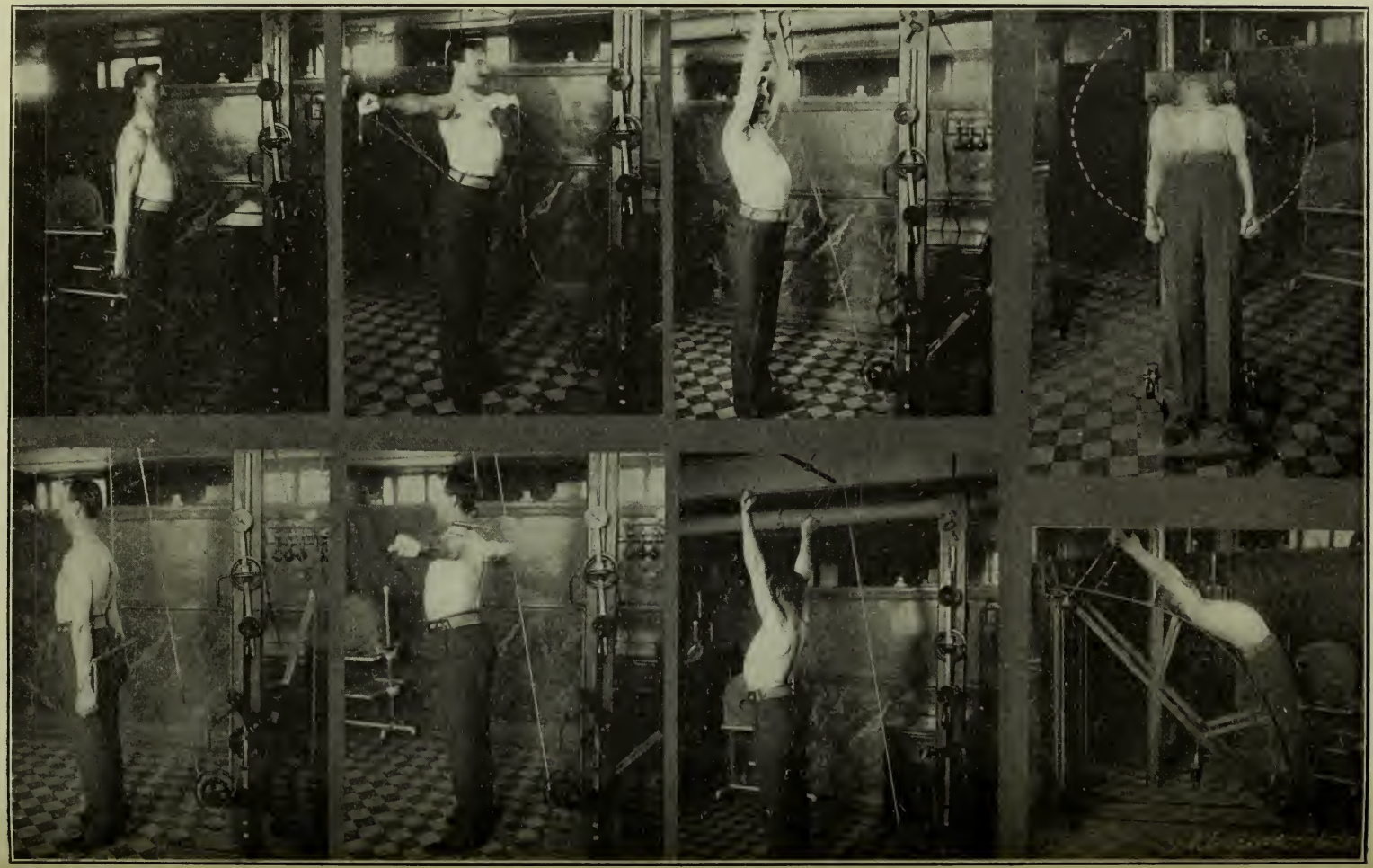
TO ENLARGE AND MOBILIZE THE THORAX.

7

a Position at End of Expiration. *b* Midway. *c* At End of Inspiration.

9

a Position at End of Expiration



8

a Position at End of Expiration. *b* Midway. *c* At End of Inspiration.

9

b Position at End of Inspiration

Plates by Sanders Engraving Co. Prints by Hoke Engraving Plate Co.

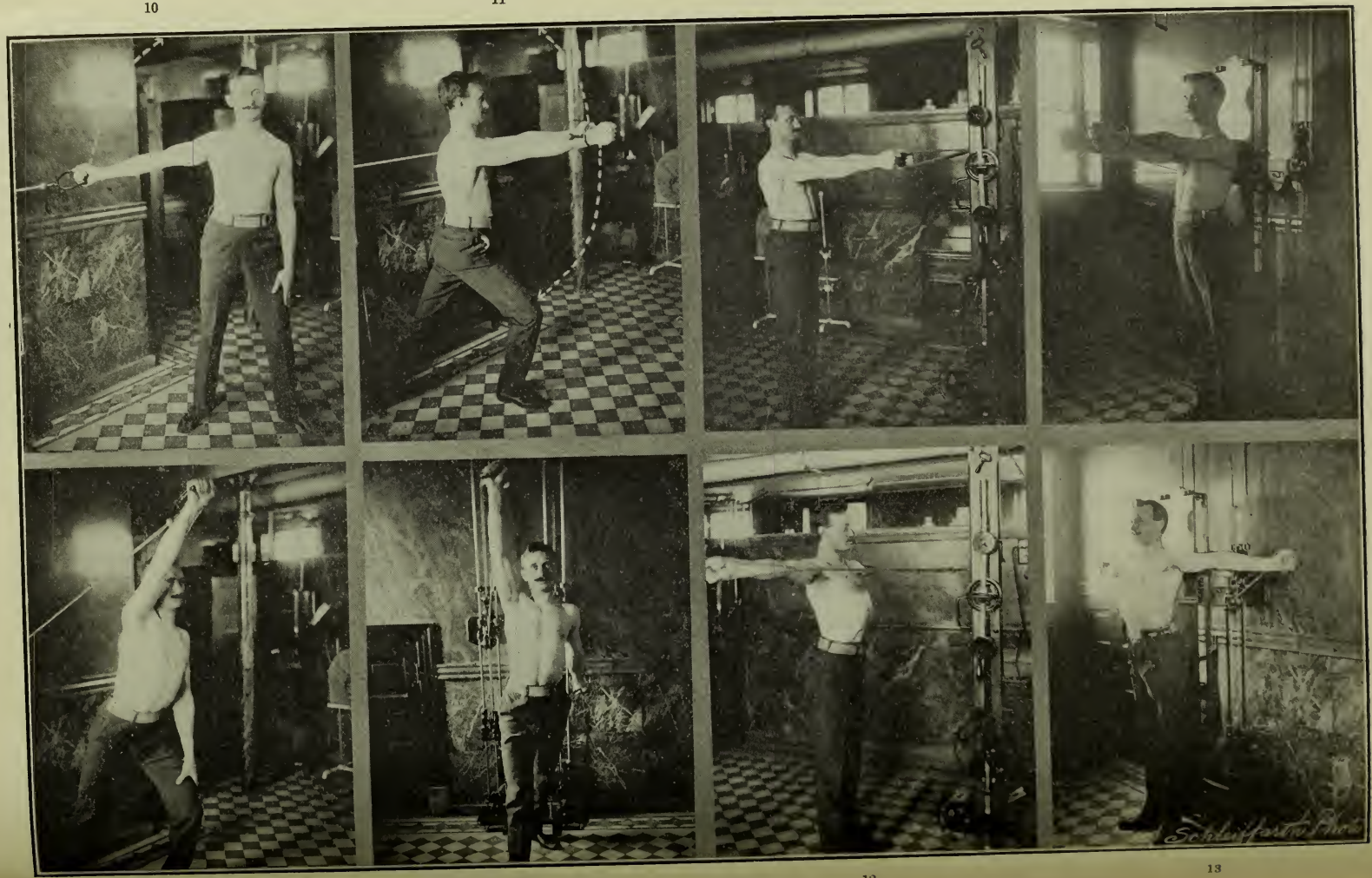
increased by breathing rarefied air, or through a valve arranged to obstruct inspiration. It will be sufficiently effective, however, and much more practical to depend simply upon the aspiration of forced inspiration. In health, this amounts to about—40 mm. Hg (Quincke; Leyden), or almost four times the lowest estimate for ordinary inspiration. If expiration be kept shallow, the pressure at its end will not rise above—3 mm. Since the abdomen is a closed cavity, and the organs in its upper part moreover are bound to the diaphragm, every ascent of this muscle is certain to draw up the abdominal viscera. That the amount of this lifting is not to be despised is evident from the fact that in health, a forced inspiration causes the edge of the liver to rise about two inches. These same forced inspirations will assist likewise in fulfilling another of the therapeutic indications, viz., enlargement of the lower thorax. According to the degree of inspiration, the circumference of the diaphragm increases one to four inches (Keith). In a healthy man, a forced inspiration adds from one-twelfth to one-seventh to his girth at a point a little below the ensiform cartilage (Valentin). Certain special exercises will give further help in this direction. The methodical practice of deep breathing, no matter how, is sure to result in some increase in chest capacity. A general enlargement and mobilization of the thorax is secured best, however, by exercises which couple action of the accessory muscles of inspiration with regular and full intake and outflow of breath. Muscles belonging to this category, and which are available practically for the purpose are those which may lift the thorax (sterno-cleido-mastoid); raise or fix the ribs (subclavius, cervicales descendens, pectorales, latissimus dorsi, serrati, scaleni and quadratus lumborum); fix the shoulder (trapezius, rhomboideus, levator anguli scapulae); or straighten and stiffen the spine (erector spinae, multifidus spinae, etc.).

Development of the diaphragm is attained by deep abdominal breathing which also strengthens the transversales. Incidentally, the lesser or gastro-hepatic omentum will be alternately relaxed and stretched as the liver and stomach swing forward on each other and again fall back with the movements of the diaphragm, a sort of passive exercise likely to improve the nutrition of this peritoneal tether and vessel-bearing bridge. On the other hand, training the abdominal muscles in their inspiratory work necessitates the practice of a purely costal type of respiration. This object is promoted also by deeply inspiring while a movement is executed by means of the abdominal muscles. Besides rendering the services referred to, the cultivation of respiratory activity as outlined, possesses the desirable influence of aiding the circulation of both blood and lymph within the abdomen. Thoracic aspiration acts like a suction pump upon the inferior vena cava and the thoracic duct. Every time the diaphragm descends, the contents of the thin-walled veins and lymphatics are squeezed onward, backflow being prevented by valves in the vessels of the lower limbs. But in order that

TO ENLARGE AND MOBILIZE THE THORAX.

POSITIONS AT END OF EXPIRATION.

10 11 12 13



10 11 12 13

POSITIONS AT END OF INSPIRATION.

Plates by Sanders Engraving Co. Prints by Hoke Engraving Plate Co.

this may take place, it is necessary to keep the abdominal walls from yielding either by muscular contraction or by pressure applied outside. The development of the abdominal muscles with a view to their re-establishment as the natural means of maintaining pressure and of supporting the viscera within the abdomen requires certain exercises for the trunk and lower limbs. These constitute an essential complement of what might be termed the respiratory treatment of splanchnoptosis. An explanation of their purpose and even the description of a few may be found in various treatises on the disease. For this reason, these particular exercises will not be dealt with further in this paper which is limited to the consideration of specific principles of treatment almost, if not wholly, unknown.

A diligent search through the available literature directly or indirectly bearing on the subject of visceral ptosis failed to disclose an expression of views in any way similar to those here presented except in the three following instances. Taylor[24] recommends: "Above all, specific, definitely directed voluntary movements, educative in character, of respiration, thoracic action, and especially of the abdominal muscles," and says elsewhere (p. 136): "Systematic breathing exercises, even though they be clumsily and partially employed, produce gratifying results. When these are consistently taught and faithfully practiced, this measure alone will establish a degree of invigoration of the whole economy which will satisfy the most exacting." Mathes[25] comes nearer the point with the statement that "the greatest weight is to be placed upon systematic gymnastics which should aim especially at developing and strengthening the thorax;" and that "gymnastic exercises for strengthening the thorax and the abdominal walls meet causal indications." Smith,[26] after remarking that it seems to him that Mathes has not exaggerated the importance of chest development, says: "If the patient is young and the thorax more or less mobile, I have often given a system of breathing exercises with the idea of increasing the lung capacity and the size of the upper abdomen." None of the authors quoted, nor any others so far as could be ascertained, point out that a number of the chief anomalies present in sphlanchnoptosis logically call for correction by breathing exercises. Neither has anyone formulated a definite scheme of gymnastic treatment deduced from the pathology of the disease and the physiology of respiration. It must not be inferred that the method advocated is intended to supersede such other physical, dietetic or even medicinal remedies as are indicated and have been proved beneficial. This applies particularly to a rest-cure when there exists great emaciation or general break-down. The claim is made, however, that this method is not only compatible with, but essential to any rational plan of treating the visceral ptoses.

The photographs presented on the succeeding pages illustrate exercises for the practical application of the principles set forth. They were made by my friend, Dr. Charles W. Schleiffarth, whose

18

To Increase Capacity of Upper Abdomen.

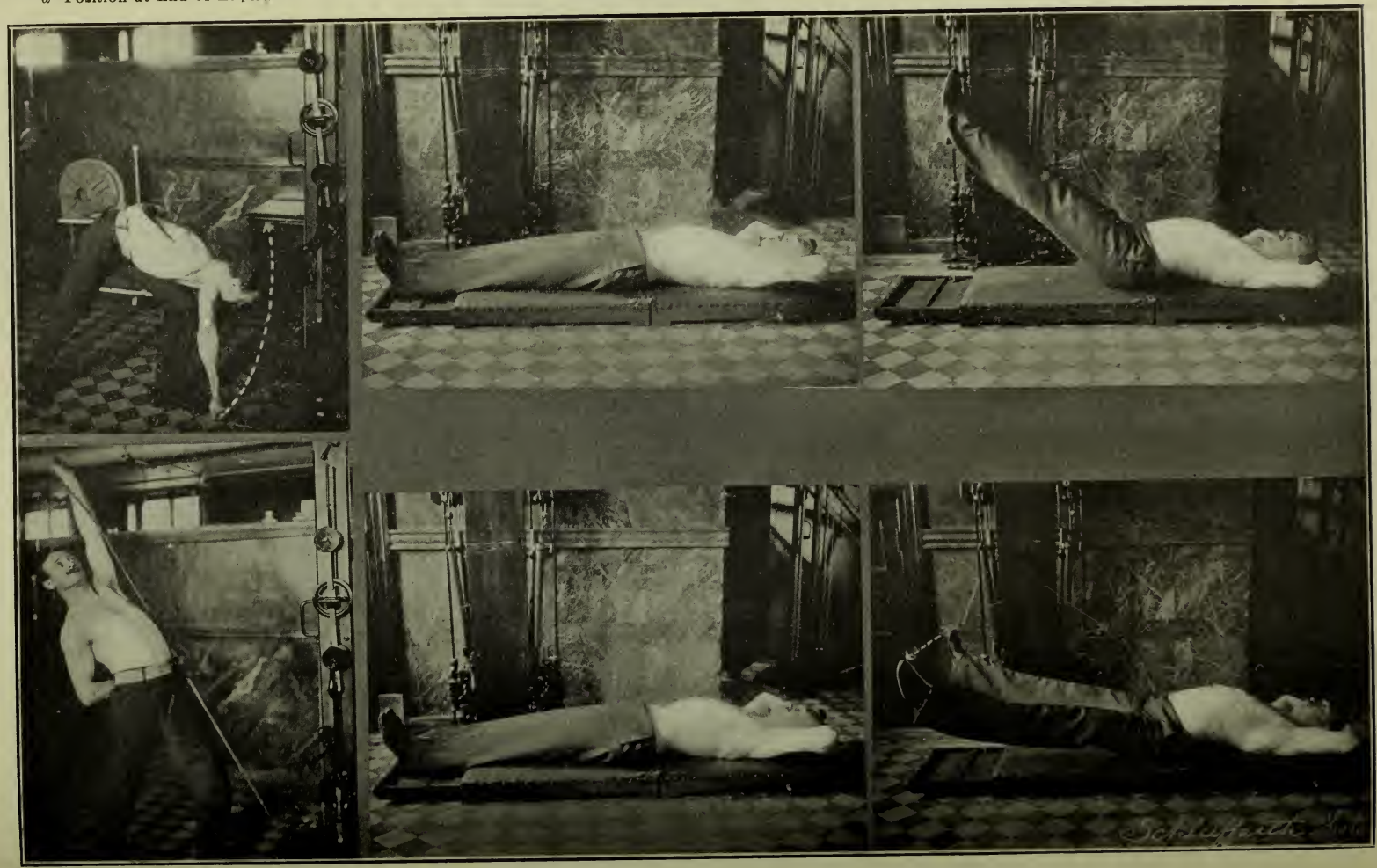
a Position at End of Expiration.

19

To Develop Inspiratory Tension of Abdominal Muscles.

a Position at Rest at End of Expiration.

b Position at End of Movement and of Inspiration.



Plates by Sanders Engraving Co. Prints by Hoke Engraving Plate Co.

18

To Increase Capacity of Upper Abdomen.

b Position at End of Inspiration.

20

To Develop Inspiratory Tension of Abdominal Muscles.

a Position at Rest at End of Expiration.

b. Position at End of Movement and of Inspiration.

medical knowledge, no less than his skill in photography contributed greatly towards bringing out so plainly the features which were to be shown. The characteristic poses testify to the muscular control as well as the interest and patience of Mr. F. C. E. Schneider, Instructor in Physical Culture in the St. Louis public schools. The writer takes this occasion to express his grateful appreciation of the services rendered him by these two gentlemen. No attempt has been made to picture each and every one of the exercises which the writer is in the habit of prescribing, but only those which are fundamental, and enough others to serve as examples. Exercises designed in particular for strengthening the abdominal walls, although an indispensable part of the gymnastic treatment, are not shown for the reason already mentioned. To get results, the correct execution of each exercise must be taught the patient, and maintained by strict supervision. It is often desirable to intensify action or to provide variety by duplicating an exercise with some other of like character, but different form. The best effects can hardly be obtained without some kind of graduated resistance. Exercises performed with apparatus at the writer's establishment are supplemented by others for home use. Patients in bed can be prepared for subsequent more energetic procedures by a graded course of passive and manually resisted movements.

2924 South Grand Avenue.

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14
To Enlarge and Mobilize the Thorax.
Alternately Right and Left with Inspiration and Expiration.

16
To Develop Diaphragm, Increase Intra-abdominal Pressure and Favor Circulation.
a Position at End of Abdominal Inspiration with Protrusion against Resistance (Weight).

17
To Elevate Diaphragm.
a Position at End of Deepest Possible Thoracic Inspiration.

15
To Increase Capacity of Upper Abdomen
Lower Thoracic Inspiration and Expiration. (Manual Aid Optional.)

16
b Position at End of Abdominal Expiration with Retraction under Pressure (Weight).

7
b Position at End of Shallow Expiration.

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DISCUSSION.

Dr. J. M. Allen, Liberty: The Section is to be congratulated on having heard this paper. You will not get these facts in any work on medicine that I know of, although one work touches this matter and that by Eccles, of Manchester, England, who has written a book on gastroptosis. There are several conditions that produce gastroptosis. All neurotic conditions tend to produce it, because the lowered vitality of the vasonervous mechanism permits a relaxation of the tissues. Again, you will find it in neurasthenic women, the reflexes affecting the circulation of the blood in the veins until the amount of blood in the veins and other organs of the abdominal cavity will be one-third more than it would be normally. The arteries of the abdominal cavity are amply protected, as they pass through the muscular coat of the intestines, and the consequence is that venous congestion occurs. In dealing with the condition, I try to treat the ulterior cause. The treatment suggested by Dr. Shattinger is good as far as it goes. I do not ascribe it so much to the condition of the abdominal muscles as he does. Before you can successfully treat a case of gastroptosis you must get at the cause of it.

Dr. B. H. Zwart, Kansas City: The logical reasoning of the essayist must appeal even to those who have not been enthusiastic in the mechanical treatment of these conditions,—conditions in which neurasthenia is a potent and most noticeable element. I have long been interested in the mechanical treatment of ills of this character and I am particularly glad the doctor omitted to mention any therapeutic medicinal treatment of the condition. I believe resisted movement is the treatment par excellence at our command. I trust that the treatment advocated by the essayist will stimulate even those who have been interested in the me-

chanical treatment to further efforts. There is no question but we are drifting further and further away from the medicinal treatment of chronic conditions.

Dr. Robert T. Sloan, Kansas City: I was particularly interested in Dr. Shattinger's paper, as much of his argument was new to me. I am not willing to subscribe to everything he says. I believe, however, that even if there is some fallacy in his reasoning, he does obtain the result by the physical culture exercises, of which these breathing exercises are a part. I look upon splanchnoptosis as a neurosis, due to a general loss of tone, of which lack of muscular tone is but a part, and the lack of tone of the vascular system is perhaps the larger part. The results would be perhaps as good if he would instruct his patients to breathe, *habitually,* a little more deeply than they usually do. It is characteristic of neurasthenics to breathe superficially. They have the capacity for deep breathing but they do not use it. I think no plan of physical culture exercises can quite take the place of the rest treatment in advanced cases.

Dr. C. S. Roberts, Joplin: Ninety per cent. of those present will be benefited by this paper and I belong to that ninety per cent. But there ought to be a word of caution for those of us who will undertake to adopt it, and that is, we should take care not to over-do the thing. I have found from experience that it is very easy to over-do it. Where it is needed most, the least amount of it will do the most good at the start. Therefore, those of us who are inexperienced may carry the exercise too far and thereby get more weakness instead of some strength. The weaker the muscles, the less exercise is required.

Dr. John Punton, Kansas City: The argument Dr. Shattinger presents is a step in the right direction, but he undertakes to do too much. The term neurasthenia, as now used by the majority of physicians, is a badly misused word; it is a neurological waste basket into which are dumped all the conditions the physician does not understand. Neurasthenia is a lack of nerve tone in which the underlying condition is not known. Neurasthenia is a very rare condition and this whole subject is as yet undefined. If it is true that the vast majority of persons suffer from gastroptosis congenitally, then it would seem that neurasthenia, if that is always associated with it, must be a very common disease, while as a matter of fact it is, as I have already said, a very rare condition. I do believe, however, that there are cases that will be greatly benefited by the method outlined by Dr. Shattinger.

Dr. G. W. Robinson, Nevada: I take issue with the doctor in treating these cases too much by exercise. Neurasthenia belongs to the fatigue neuroses, a condition in which there is a loss of tone. The best treatment for such a condition is to put your patient at rest. Your loss of tone is brought about by a lack of nutrition of the nerves and muscles. If you use these exercises you exaggerate the condition. The nerves and muscles will adjust themselves if you attend to nutrition and

elimination. The abdominal binder does the work that the muscles ought to do and we know that if we do the work for a muscle the muscle will not do that work.

Dr. Shattinger, in closing: Some confusion has resulted from the impression which seems to have gotten about that I was dealing with neurasthenia. The paper was intended to deal with ptosis of the abdominal viscera and touched upon neurasthenia only in so far as neurasthenic symptoms are often found in these cases. I do not advocate this treatment for neurasthenia, nor do I advocate it alone for the treatment of abdominal ptosis. When taking a rest cure the patient can be prepared while in bed for subsequent treatment of the kind shown by the photographs. I also tried to treat of the development of the thorax, for other authors refer only to the development of the abdominal muscles. I wanted to bring out what may be termed thoracic treatment of an abdominal disorder. I agree with the doctor who thinks that these patients should be trained to breathe twenty per cent. more deeply than they do habitually, but you have to give them the muscular development to enable them to do it. As to the abdominal binder, Dr. Greer told you that he kept up the use of the straps and his patient got along very well. That was just what I said in my paper; if you begin strapping you will have to keep it up. I do not suppose, however, that in Dr. Greer's case it would be possible to hold up such an enlarged spleen without a binder; nevertheless, the case substantiates the claim that once a binder is used, it must be used permanently. Exercise is developmental and strengthening only when it falls short of exhausting the natural recuperative power of muscular tissue. That is why the exercise must be supervised by the physician. These patients will in their enthusiasm at first over do, and later not do enough, unless controlled and guided by the physician.

SUITABLE PATIENTS FOR THE MISSOURI STATE SANATORIUM FOR INCIPIENT PULMONARY TUBERCULOSIS.*

BY ORVILLE HARRY BROWN, M. D.

It is a statement which will undoubtedly go uncontradicted, that the founding of the State Sanatorium for Incipient Pulmonary Tuberculosis was purely in the interests of humanity. The law-making bodies of our State, recognizing that a wise selection of cases for the institution would be one of the factors of paramount importance in insuring for society the greatest culmination of benefits to be derived therefrom, distinctly stated in the name bestowed upon the sanatorium that it was for persons with the incipient stage of tuberculosis of the lungs.

Since there is no institution in the State for past-incipient or advanced cases, the interpretation of the meaning of incipient becomes a problem of prime importance. Webster says incipient is "beginning" or "commencing." The incipient stage of a disease according to this definition is the period of implantation of the morbid producing processes. The mere passing of tubercle bacilli into the lungs, the lodging of them there, and their beginning to grow and multiply, does not produce symptoms for a considerable period, and yet strictly speaking this is the incipient stage of this disease. The duration of this period depends on two factors, namely: The virulency of the invading organisms and the resistance of the attacked individual. Since the date of the exposure to the germs is absolutely impossible to locate, and since it is impossible to know either the virulence of the organisms or the resistance of the individual in any particular case, there are no means of locating the truly incipient state in any case. Another interpretation of incipient,—one which is practical,—must be sought.

It would seem to be expedient for us to use the word incipient in connection with recognizable,—*i. e.*, by incipient pulmonary tuberculosis, would be always meant the incipient period of recognizable tuberculosis. Does this definition serve the commonwealth the best possible so far as it is concerned about the sanatorium? We answer unhesitatingly, yes, but we append,—the recognizable cases must be discovered within a comparatively few weeks after they become recognizable, or, otherwise, they must be excluded as being past incipient cases. Another dependent clause perhaps should also be attached to the above, and this should read, that from these cases that are recognized a reasonable number must be convinced that they have tuberculosis, and they must recognize that their condition calls for immediate treatment, and a sufficient

*Read in the Symposium on Tuberculosis, Fifty-first Annual Meeting, Springfield, May, 1908.

number to fill the sanatorium must believe that the most desirable place for them to get this treatment is at the State sanatorium, otherwise the sanatorium will not be filled. Two sad admissions must follow. First, it is a lamentable fact that the average general practitioner does not recognize pulmonary tuberculosis until the disease is well advanced,—and even then sometimes he has doubt about his decision thereover. The second admission is less deplorable, but it must be dealt with. It is, that many people, even though they have been assured by reliable physicians that they have incipient pulmonary tuberculosis, either will not believe it or will not take cognizance of it.

Although uncalled for in this article, it is perhaps advisable to state that the reason that physicians fail to diagnose pulmonary tuberculosis when they should is two fold:—first, they examine the chest superficially, through the clothing often; and second, they have not perfected themselves in the methods of physical and laboratory diagnosis. Snap-shot diagnosis is entirely too prevalent and should in every case be labeled as pernicious.

Since, if either of the two definitions so far given for incipient, were adopted, none, or, at most, very few cases would be sent to the sanatorium, it is necessary to place another interpretation upon the meaning of incipient. Why not say that any case was an incipient one whose initial symptoms,—the date of which can usually be located by a careful inquiry into the history,—does not date back for more than six months. The following example will illustrate a difficulty with this. Two cases exist with practically identical physical findings, so far as can be discerned. One case has been ill only a short time and is going down rapidly; the other has been ill a much longer time and his condition is just about remaining stationary. A difference between the two exists; plainly one has a much better chance for a speedy death than the other, and the other it is to be expected has better chances of recovery when conditions are rectified. This may be due to a markedly virulent type of infecting bacteria in the case with the rapid decline, and a mildly virulent type in the other, or to a much decreased content of the body's protective factors in the former, and a normal or nearly normal amount of the protective factors in the latter, or there may be both an increased virulency of the bacteria, and a decreased bodily resistance in the former, whereas the converse of this may exist in the latter case.

The former case is not, for our purpose, as nearly an incipient case as the latter, even though the latter has been ill much the longer of the two. The duration of the symptoms can clearly not serve as a criterion for incipiency.

The following definition of an incipient case of tuberculosis was propounded at the time of the opening of the sanatorium, and was printed as a part of the instructions to the examining physicians:

"First will be described what is not an incipient case. A past incipient case, is (1) one which may have acute manifestations associated with fever and signs of progress; (2) which has distinct febrile reaction, weakness and other signs of toxemia after doing a small amount of work; (3) which may have an involvement greater than a half of one lobe; (4) which may have marked ulcerative processes with cavity formation; (5) which may have laryngeal tuberculosis, as indicated by prolonged hoarseness; (6) which may have intestinal tuberculosis, with pain and diarrhea; (7) which may have marked loss of weight.

An incipient case will be considered one in which there is no marked impairment of function, either local or constitutional, and in which the localized consolidation is moderate in extent, involving less than half of one lobe, usually with little or no evidence of destruction of tissue or disseminated fibroid deposits; and in which there are no serious complications; and in which there is no rapid loss of weight; and in which the tubercle bacilli may be present or absent."

This definition was modeled very closely after that given by the National Association for the Study and Prevention of Tuberculosis. In order to show the close similarity between the definitions, that of the National Association's follows:

Incipient. Slight initial lesion in the form of infiltration limited to the apex of one or both lungs or a small part of one lobe. No tuberculosis complications. Slight or no constitutional symptoms (particularly including gastric or intestinal disturbance or rapid loss of weight). Slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest. Expectoration usually small in amount or absent.

Moderately Advanced. No marked impairment of function, either local or constitutional. Localized consolidation moderate in extent with little or no evidence of destruction of tissue; or disseminated fibroid deposits. No serious complications.

Far Advanced. Marked impairment of function, local and constitutional. Localized consolidation intense; or disseminated areas of softening; or serious complications.

Are the above definitions of incipient pulmonary tuberculosis satisfactory in every respect for our purposes? For various reasons they are not. Perhaps the most important reason of all is that most cases of tuberculosis are not recognized until they are past what these definitions designate as the incipient stage. The definitions are somewhat complicated and many physicians experience more or less difficulty in understanding the meaning that is intended to be conveyed by them. Even if the meaning is perfectly clear to most physicians some will have trouble in arriving at a conclusion as to whether a case does or does not belong in the incipient class.

Many cases that are plainly past incipient cases according to the above definitions, do well under Sanatoria treatment. The Sanatoria records show this. Therefore, it would be wrong to exclude past incipient cases whenever there are not a sufficient number of cases of the incipient class to occupy all the beds.

In the short Sanatorium experience of the writer it seems to him that past incipient cases should be classified as favorable, doubtfully favorable, and unfavorable. When the number of incipient tuberculosis patients will not require all the room, favorable past incipient cases can be received at the Sanatorium in order that none of the beds may go unoccupied. Such an arrangement should doubtless accomplish the greatest good for the greatest number. A moderately advanced case, we will say, can be greatly benefited and put on the road to permanent recovery, in eighteen months. An incipient case, we will say, can receive the same benefit in six months. Three incipient cases can be treated in the same length of time and at the same expense as that required by the past incipient case. It scarcely need be said that the State feels it her duty to care for the largest number possible, and to do for each the best possible. The determining of which of the past incipient cases are favorable cases is nearly as difficult as deciding on which is or is not an incipient case.

The author has some hesitancy in attempting to set up a dividing point between favorable and doubtfully favorable cases. There are, however, several points which are very evident.

Point one has to do with the extent of the disease. Is there marked consolidation and ulceration? Is there extensive breaking down and softening? Are the respiratory sounds greatly altered from normal? Are there evidences of extra pulmonary involvement? Suffice it to say that other factors being equal the greater the extension of the disease the more serious the condition.

Point two has to do with the findings of a general examination. A patient who is extremely thin or weak or sallow, or anemic or cyanotic or dyspneic, or who has evidence of a serious pathological heart or kidney condition, or who has tuberculous glands or fistulæ, or who has other serious complications, should be very carefully inspected before it is decided that he is a suitable case for the Sanatorium. As a rule any complications should prevent the sending of a case to the Sanatorium until the condition is removed.

Point three has to do with the condition of the nervous system of the patient. Too much stress will scarcely be attached to this. It has been repeatedly observed that the degree of contentment manifested by the patient while taking the cure is closely paralleled by the rapidity of his advancement. A patient that is illy satisfied, irritable and homesick has a rough and rocky road of recuperation to travel.

(a) *Homesickness.* Some persons can scarcely stay from home and friends in unusual surroundings and not become homesick even when

well and it is worse when ill. It is better if a patient has been accustomed to being away from home.

(b) *Irritableness.* Patients in sanatoria must be able to put up good naturedly with a reasonable amount of things that to them do not seem right. It should be held in mind that even at one's home events sometimes go crosswise. The patient should give a history of being able to get along with these little trying affairs, without suffering a badly ruffled temper. For some people the meals are never quite right; things are too hot or too cold; the beds are never just satisfactory; the neighbors are either too noisy or too quiet; the weather is too this or too that; complaining patients are unsatisfactory because they are disagreeable to have around and because their dispositions stand in the way of their getting well, and they frequently instill a spirit of discontent into others.

(c) *Hypochondria.* Some patients wake up every few mornings with new symptoms; they have trouble with the stomach, or the liver, or the heart, or there's a pain here or a pain there. Others will worry and fret and possibly cry for hours if their temperature jumps a little above normal after having remained at normal for some time. There is no use to dwell on hypochondria as the annoying features of it are thoroughly familiar to physicians. The supreme significance of it in tuberculosis demands emphasis however. The presence of an extensive non-detachable hypochondria in a patient may be sufficient to render an otherwise favorable case unfavorable.

(d) *Mental employment.* The ability of a patient to be entertained or to entertain himself when his body must be in more or less complete repose is supremely important. It would seem that reading would be the chief and best employment, and so it is, for those patients that enjoy it, but the writer has encountered a number of patients who cannot get interested in reading. Lady patients can often, during convalescence, be allowed to do fancy work, but occasionally a patient cannot read, cannot do fancy work, cannot sit or be still, and must do something. Such a one has shoals before him or her on the return to health, and will frequently tax the inventive genius of the nurse and physician-in-charge to find something for such an individual to do. This factor, however, is usually not so difficult to cope with as most of the others mentioned.

(e) *Neurasthenia.* Most tuberculosis patients have a higher or lower grade of neurasthenia. A severe type of neurasthenia complicating tuberculosis may be a paramount factor in preventing the recovery from the tuberculosis. The treatment of neurasthenia however is the same as that of tuberculosis, and when both are of a mild type, unless there are other impeding elements, the convalescence from the consumption will not be greatly hindered by the neurasthenia. A history of neurasthenia should be taken into consideration in determining the favorability of the recovery of any particular case.

Point four is concerning the virulency of the disease. As previously stated the rapidity of the extension of the disease may depend on the virulence of the bacteria or upon the resistance of the individual. Except by animal experimentation there is no reasonably sure way of ascertaining this. It is of little or no value, however, to know, in an individual in whom the disease is rapidly spreading, whether a virulent strain of bacteria or whether an inferior resistance of the individual is responsible for the rapid spreading. It is enough to know that the disease is advancing rapidly.

Point five has to do with the physical constitution of the patient. His resistance, evidently is or has been below normal or otherwise he would not now have the developing infection. The problem to decide, is, how far from the immune point does the individual stand? Somewhere in the existence of the individual has there been something at fault,—or possibly we should add the fault may have been with the ancestry. Is there a taint of moral or physical weakness in the ancestry? If so, this may cause us to think that the patient may have had an inherited weakness. Has the individual lived a life of moderation, reasonable in his working, reasonable in his playing, plentiful in his sleeping; or has he been an indefatigable worker, stingy in his recreation and in his rest; or has he led a life of dissipation, going to excesses in so called pleasures, working and resting only when he was not able, or when he was not availed of the means to satisfy his natural,—or perhaps it is only habitual,—trend? Does the individual give a history of prolonged and frequent serious illnesses? Has he had scarlet fever, rheumatism, pneumonia, typhoid fever, etc., and in such case was the convalescence rapid and unbroken? Has he been subject to colds and influenza, which were difficult for him to throw off? It is only by a consideration of such points as these that the resistance of an individual to disease can be in any measure ascertained. The question of immunity and protection is at present receiving considerable attention, but we have no means yet of accurately measuring to see if any certain individual comes up to the standard. The examiner should take all of this into consideration, however, in deciding whether any particular past incipient case is or is not favorable for the benefits of sanatorium treatment.

Point six has to do with the patient's ability to take nutrition. Some patients are parsimonious in their likes, resolute in their distastes, quavering in their attempts to follow orders about their eating, and hence are likely to have trouble to build up properly in weight. As the question of the treatment of tuberculosis is very largely one of getting the proper weight and of keeping it, the question of one's ability to take nutrition is a particularly important one. As the stomach is very likely to suffer minor derangements in tuberculosis, a history of previous chronic stomach complaint may be of extreme significance. This is a very important point to consider, when making a prognosis in tuberculosis.

Point seven has to do with a test. When an examiner is not sure about the classifying of a case, he should make a test case. He should get instructions from the authorities at the sanatorium as to how to care for the patient; how to have him live,—in regard to his sleeping, eating, resting, exercising, etc.. If sufficient progress can be obtained by the procedure to be outlined, the evidence is that the patient is a favorable case. The degree of the success will largly depend upon the physician, the patient and his surroundings.

A careful consideration of the above points should be of some advantage in bringing one to a conclusion as to whether any particular past incipient case is or is not likely to be a favorable case for the benefits of sanatorium treatment.

Summary. The definition of incipiency is arbitrary. That adopted by the National Association for the Study and Prevention of Tuberculosis is not entirely practical at present, owing to the fact that most cases of tuberculosis are not recognized until they are in the past incipient stage. This is, indeed, a lamentable admission. If only cases that conform to this definition of incipiency are received into our State Sanatorium, a certain proportion of our beds will remain unoccupied. Therefore, some further provision must be made. The author is permitted to announce that when there cannot be obtained a sufficient number of cases,—incipient according to the definition propounded,—to fill the beds there will be taken the required number of favorable past incipient cases. In deciding what is a favorable case, the physical findings in the lungs, the findings of a general examination, the complications, the rapidity of the development of the disease, the condition of the patient's nervous system, and the ability of the patient to take a full supply of nutrition, should all be carefully considered before arriving at a conclusion. When in doubt the patient can be put on the treatment as outlined by the sanatorium authorities, and he can, perchance, be proven to be a case capable of making improvement. Any other points of importance, which the author may have omitted through ignorance or thoughtlessness, should also be considered. It affords the writer pleasure to state that the medical director, the president and the lay members of the board of managers approve of the plan suggested in this article.

CLINICAL REPORTS FROM MT. ST. ROSE HOSPITAL.*

BY SOLON CAMERON, M. D., ST. LOUIS.

In presenting this paper from the pioneer hospital for the special care of tuberculosis patients in our State, I am offering you no vague hypotheses but absolute facts and sound deductions, gleaned from the records of the 1400 cases that have been treated at the hospital in the past five years. The work is so large and the workers so few that we are unable to make the most of the material at hand or to work out many of the fine diagnostic points presented to us. It is due largely to the efforts of one man, laboring without remuneration and at the personal sacrifice of time and money, aided by the Sisters in charge of the hospital that the work has grown from a humble beginning to its present importance, and the preparations are at this time under way to double the present capacity of the building.

At Mount St. Rose Hospital, the Mecca for advanced cases of tuberculosis from St. Louis and the adjacent territory, we have patients who have tried every climate, followed every system of treatment, and presenting every known symptom and complication.

The digestive and nervous systems of many of them are deranged owing to the heroic efforts that have been put forth in an attempt to improve the nutrition, check the cough and combat other disturbing complications. Our first course with these patients is to stop all medicine for a few days, in order to get a clearer insight into their true condition and their needs.

We endeavor to gain the entire confidence of the patient and bring him to a thorough realization of the large part that he, by his coöperation and observance of regulations, must play in securing an alleviation or favorable termination of his case.

One of the most important results to be gained from the intelligent understanding of the patient will be his ready perception of the fact that transitory symptoms such as pleuritic pains, gastric disturbances, night-sweats and fever are simply the accompaniments of his general condition and if not of unusual severity need not be specially treated.

If there is no important complication they are put on a regimen of nutritious diet and daily exercise in the open air graduated according to their physical condition. Medicinally they are given a reconstructive, easily assimilable tonic of cod liver oil, creosote, (very small quantities), guaiacol and the hypophosphites, also a combination containing strychnine 1-30 to 1-60, reduced iron and arsenic to support the heart and assist in the upbuilding process.

*Read in the Symposium on Tuberculosis, Fifty-first Annual Meeting, Springfield, May, 1908.

Fever, the most common symptom, is in the great majority of cases when properly handled, the one most easily subdued. It does not respond readily to the usual antipyretics and the coal-tar products should not be used except as a last resort. Quinine is useful in many of these cases and also shows a beneficial effect on the patient's general condition, possibly because of a malarial complication which must always be thought of in the Mississippi Valley. The patient with a temperature of 99° or over should be placed at rest in bed and every exertion avoided. Some patients who show a persistent temperature of 99° or a little more may, under close observation, take graduated exercise with the result of reducing the fever, improving the digestion and toning up the system. With this single exception every case of fever should be handled with the rest cure.

Hemorrhage, the most distressing and alarming symptom to the patient, and the one which will often tax to the fullest the ingenuity and resources of the physician, is the one on which there is the greatest divergence as to treatment. In the profuse hemorrhage from the rupture of a large vessel traversing a cavity there is a rapid and fatal termination. This condition is, however, relatively, very rare. In every case of bleeding we apply the bandage and compress according to the method originated by Dr. Porter. This consists of applying around the chest a towel or bandage at least six inches wide as tightly as possible. Under this and over the point of bleeding should be placed a roller bandage or towel tightly rolled. This differs from the ordinary strapping in that there is a single point of compression, fixing the chest wall and rendering it immovable at the site of the lesion. Magnesium sulphate may be used to deplete the circulation. There is something more than a remarkable coincidence in the fact that under this treatment every case of hemorrhage that has occurred at the hospital has been handled with gratifying results. Morphine should be used only when it is necessary to quiet the excitability of the patient. In extreme cases the ice bag may be placed over the bandage or above it. In those cases that show high arterial tension nitroglycerin is a valuable aid, but it should be judicially used and closely watched in its effect.

The night-sweats are in many cases the first danger signal warning the patient of his condition, although they are also a factor in about 25 per cent. of the second and third stage cases. While discomforting and discouraging, especially to a neurasthenic patient, this condition usually responds readily to the rest and fresh air treatment. The body should be sponged at night with alcohol and water, to which a little alum has been added. The various drugs advocated for this condition, most prominent of which are atropine sulphate, camphoric acid and dilute sulphuric acid act with widely varying results in the different cases.

Cough, the symptom that we have always with us, should not be specially treated except in case of the gravest necessity. That cough resulting from an effort to dislodge the accumulation of secretion in the

lung is a very natural act and is necessary to the patient's well-being. He should be instructed to thoroughly clear the lungs with as little coughing as possible and to abstain from all unnecessary coughing with its consequent irritation to the membrane of the lung. That cough arising from complications of the larynx or pharynx should be treated by inhalations, the spray, or local applications, as silver nitrate, oil of eucalyptus or menthol. The most persistent coughs of third stage cases will show a decided alleviation when the patient is placed at rest in bed.

There is one point which to my mind has been greatly neglected by the authorities in dealing with the treatment and prognosis of tuberculosis. Strange as the statement may seem, it is nevertheless a fact, the truth of which is more forcefully brought home to us at a hospital like Mt. St. Rose, where the patients range in mentality from the various learned professions to the illiterate, that the first and most important factor in the successful treatment of tuberculosis is the personal intelligence of the patient in regard to his condition.

When we see a patient endowed with strong mental characteristics, possessing stamina and grit and that do-or-die spirit that is ready to combat any obstacle or endure any hardship in the work of coöperating with his medical advisers, we know that we have a case which, if the fight has been commenced before the odds are too great, will result in victory. The patient must have that intelligence which will enable him to realize the gravity of his situation while the symptoms are slight; to know that he is in the embrace of a treacherous foe, and to know that only by persevering resistance and continued defense can the battle be won. Give us a patient who is ready to follow willingly and confidently the hygienic and medical regulations in his case, be they ever so rigorous, and the prognosis will be most favorable for conquering or at least greatly arresting the disease.

This is a point to which I have paid particular attention, as aiding me in the prognosis for the various cases, and it is a sad but incontestable fact that too many of our patients, it would seem, prefer to die comfortably rather than to get well uncomfortably through an arduous compliance with the line of treatment indicated for them.

Right here you have one of the chief reasons for the large fatality of tuberculosis among the negro race. Their irresolute, supine natures, with their ignorance of the most fundamental elements of hygiene lead them to retire and hide among their fellows like a wounded animal in its lair, with never a thought that the means of cure is within their grasp and more dependent on them than on any one else.

It may be true that hope springs eternal in the consumptive's breast, and if so you should never rest until you have exhausted every means to displace this vague, inactive, groundless hope with the lust for battle with the incidious foe. Even in the acute cases the personality and intelligence of the patient is still our most important factor. Only with the intelligent aid of the patient can we most successfully employ our greatest

ally, the rest treatment, in combating the obstinate and destructive fever with its draught on the patient's strength and rapid onward course of the disease.

As an example of the importance of this factor let me present to you the case of Mrs. C. L. B., who was examined on April 5, having on that day a temperature of 104 and weighing 100 pounds. Late in November of 1907, at which time she weighed 147 pounds, she contracted a severe cold and soon began to have violent attacks of coughing with daily fever. Her physician advised her to take long walks and administered symptomatic treatment, but her symptoms were unabated and she continued to lose weight. I found crepitation throughout the entire right lung, with weak and rapid heart action. The microscopical examination showed the presence of tubercle bacilli in great numbers.

Being a woman of a high order of intelligence I acquainted her with the situation and brought her to a realization of the large part that she must have in the efforts put forth in her behalf. She was placed in bed at absolute rest and quiet, not allowed to comb her hair or perform any other act which would be the slightest exertion to her. She was given no medicine except a little quinine and a tonic. In ten days her temperature was normal, her cough, except for clearing her lungs in the morning, had left her and her appetite and digestion were much improved. On May 10th she had gained 5 pounds, was enjoying freedom from cough and fever, and was spending eight hours a day on a couch in the open air. This result I attribute largely to the attitude in which the patient faced the situation.

I will not weary you with a long recital of case records. But our records have proved that a satisfactory result is impossible with a dull, apathetic, forceless patient. We have never known a bad effect to follow the course of revealing to a patient his true condition and making every effort to arouse his fighting instinct. I believe that the psychic effect of a cheerful, hopeful, aggressive disposition on the patient's general condition can not be over-estimated in this disease. This, gentlemen, with the simple therapeutic measures that I have outlined above is our main reliance at Mt. St. Rose.

RESPONSIBILITY OF BOARDS OF HEALTH.*

BY A. H. HAMEL, M. D., DE SOTO, MO.

From the standpoint of boards of health, tuberculosis must be and is regarded as an infectious communicable disease, and must, accordingly, be dealt with as all other diseases under this classification. However, in glancing over the statistics, it is appalling to know the proportionate number of deaths due to tuberculosis; and it should therefore be given the first consideration by all boards of health, and every possible safeguard should be taken to minimize the spread and dissemination of the disease.

The first point to be considered is that of mortuary statistics, and I regret to say that with the exception of three cities, there is absolutely no system of recording deaths whereby there could be determined the death rate in any given city or county in Missouri. The three cities giving accurate statistics are Kansas City, St. Joseph and St. Louis, giving the total number of deaths of tuberculosis from all causes for the year 1906, as follows: Kansas City, 358; St. Joseph, 112; St. Louis, 1408. This brings us to a fuller realization that the mortuary statistics outside of these three cities are purely speculative, and impresses upon the medical profession the great importance of securing a legislative enactment on vital and mortuary statistics, in order that the boards of health and the profession in general can render the greatest service to the commonwealth. Following this important consideration, I should also like to refer to two other departments of public health, namely, that of the State Veterinarian and the State Pure Food and Dairy Commissioner, as, in my opinion, legislation is absolutely necessary in these three departments, as one is interdependent upon the other to properly safeguard the health of our people. Considering the State Veterinarian in his work, it will be found in tests made of the dairy cows, that he has found that one in eight of all cows tested had tuberculosis. Is this not astounding? When we consider how many lives are nourished and at the same time infected by this very product, is it any wonder that this dread disease should be destroying so many lives? The unfortunate condition is that the State Veterinarian can make tests only when the owner of the cattle consents to having the tests made, and if the cows are found to be diseased, and the owner consents to the destruction of the animals, he receives only a nominal consideration for the destroyed animals, which is usually a less value than the apparent value of the cows destroyed; and frequently the animals are not destroyed but are disposed of by selling them to parties located in another section of the State. In my opinion, the State Veterinarian should have power given

*Read in the Symposium on Tuberculosis, Fifty-first Annual Meeting, Springfield, May, 1908.

him by legislative enactment whereby he would have authority to test all cattle, or at least such cattle as contribute food products to be sold through the market of our State. He should also have a bacteriologist, a number of assistants and absolute authority to destroy infected animals of all kinds.

We now come to the consideration of a State Food and Dairy Commissioner, which office was secured through the untiring energy of the medical profession and the earnest support of an intelligent lay public. This law was recently enacted and is proving of immense value as an agency to public health; but in the practical application of the law a number of minor amendments or additions are very necessary to make it most effective. The needs are, more assistant inspectors, chemists and a freer access to a competent bacteriologist, as the volume of business in a great number of products to be examined has at this time practically overtaxed the working force of the chemists under the commissioner.

In referring to the various departments I find that I have slightly transgressed the purview of this paper, but thought it best to present some of the difficulties which have an effect of lessening the legal responsibilities of boards of health, and will cite an agreement of the three departments mentioned in order to eliminate a dangerous product which was a menace to public health and in which condition no single department to act in the fullest capacity as State officials. The agreement was in relation to milk supply from the various dairies. The Food Commissioner collecting samples of milk but not having a bacteriologist, it was agreed to have the State Board of Health request its bacteriologist to make bacteriological examinations of all specimens collected and report to the Board of Health and to the Food Commissioner. If the product was found to be infected with tubercular bacilli, the products from said dairy or herd were ordered quarantined by the Food Commissioner until such time as the owners of the herd permitted the State Veterinarian to test the cows, and the diseased animals isolated and destroyed; all this being complied with quarantine restrictions were removed, the result being good wholesome milk, whereas it had been infected and was being sold in the markets as one of the principal articles of diet. You will, however, note that to accomplish this important result it required the combined action of the three departments, which of necessity caused some delay.

In presenting this brief synopsis, it is not with a desire to criticise the intent of the statutes under which these three departments are operating, but to try and present in a general way some slight alterations or additions which have become patent by reason of modern investigation, research and application, which would be advantageous from every point of view in improving all departments of public health matters and thereby protect the lives and health of thousands of our people, and would at least be a strong factor in forwarding the fight against the

constantly increasing spread and infection of tuberculosis; for it would remove one of the prime etiologic factors and contribute in a large measure to a healthful food product.

The object of the boards of health is primarily and finally to have general supervision over public health matters of State, counties and cities, to execute all authority derived from the statutes in suppressing and controlling epidemics, and safeguarding every interest, pertaining to preventive medicine, to the citizens or community; and in addition thereto, see that commerce is not paralyzed by reason of an epidemic running wild. This is indeed a very great responsibility, and yet it is merely putting into executive effect such rules and practices as govern the lives of all conscientious practitioners of medicine in private life,—to whom the commonwealth will always be indebted for patriotism and self-abnegation in the furtherance of health regulations through exposure to pestilence and danger, resulting in a progressively larger, more thorough and more perfect system of combating disease; and the demonstrated results are eventually placed upon the statute books as an heritage for the present and future generations, all this, be it said to the glory of the medical profession. There is, however, a difference in the responsibility of boards of health; there is always present in the mind of the honorable practitioner the question of honor and professional duty in controlling certain infectious and contagious agencies calculated to destroy the health, yes, the life of man, which may not be actually classified as legal responsibilities in the practice of medicine in times of epidemic. It really resolves into this fact, that the boards of health are advisory in capacity under most circumstances, and that limitations confront the boards under all conditions, whether they be State, county or city boards of health.

At this point, and in conclusion, if you will permit the digression, I should like to suggest that the vital facts pertaining to public health matters, and in which it is desired to have legislation added or amended as benefiting the whole people, the discussion should not be confined to the walls of a medical convention hall, but there ought to be a committee appointed from this Association, and other departments of health, which should then call to their aid, competent legal talent and formulate a plan of action to set forth and present to the people of our State for consideration and discussion such salient medical matters which might be desired in a legislative way, and which has been proven by scientific research and investigation; then let this plan go to the people, and have it thoroughly discussed with the legislative candidates, so that when the matter is presented for consideration it will be understood by all and not be subjected to amendment at the hand of some thoughless person, or possibly for the purpose of weakening the legal effect of the measures should they become law. In this way it will be possible to conduct a campaign of education on preventive medicine which will redound to the credit of our grand State and stand as a monument to the untiring energy and devotion of our noble profession.

THE WORK OF THE ST. LOUIS HEALTH DEPARTMENT IN ITS RELATION TO TUBERCULOSIS.*

BY H. WHEELER BOND, M. D., ST. LOUIS, MO.

While the work of the Health Department of the St. Louis City Government in the direction indicated in the title of this résumé is not all that might be expected of it, yet I feel that it has attained a character of sufficient importance in the amelioration of suffering in the care of the city's tuberculous poor to warrant a short account of the forces engaged.

What is known as the Dispensary Division of the Health Department comprises three Dispensaries and a Clinic for Communicable Lung Diseases, making four in all.

This organization is subdivided into the so-called Central Dispensary, located at 11th and Market streets, the North Side Dispensary, at Broadway and Bremen avenue and the South Side Dispensary at Broadway and President street. An increase in the appropriation for the fiscal year, sufficient to open and maintain two additional dispensaries, to be located in the northwest and southwest sections of the city has been asked for. This bill will be acted upon within a few days, and, if favorably, the two additional dispensaries will be opened at once.**

In connection with these dispensaries a well appointed and efficient ambulance service is maintained for the transportation of the sick and injured to the various hospitals throughout the city or to their homes.

These dispensaries are all well equipped and provided with a corps of competent physicians, and while they are designated for the treatment of all classes of injuries and disease, they are at the same time convenient and efficient in the treatment of the tuberculous poor.

The special clinic for communicable lung diseases is located near the Central dispensary. Its equipment is fully adequate to facilitate the work specified and the physicians in charge are especially selected from the standpoint of competency. A trained nurse attendant will soon become a necessity if the demands of this clinic continue to increase at the present rate. The Central and Branch dispensaries refer many tuberculous cases to this clinic for instruction and treatment, as do also many public and private charity organizations and individuals interested in the work. During the fiscal year ending April 13, 1908, there were 1825 tuberculous patients treated at the dispensaries and the clinic. Of these 1772 were treated at the clinic.

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*Read in the Symposium on Tuberculosis, Fifty-first Annual Meeting, Springfield, May, 1908.

**These branch dispensaries were opened in July, 1908.

During the corresponding period for 1906-07 the total number of tuberculosis cases treated was 234, and at the clinic 148, showing a total increase for the last fiscal year of 1591 over the preceding year.

The increase in the number of cases treated at the Clinic for Communicable Lung Diseases during the fiscal year of 1907-08 over the year 1906-07 was 1624. This great increase at the clinic is explained by the clinic's becoming more generally known, and the steady improvement in the efficiency of its management. Its possibilities would seem to be almost unlimited.

A city ordinance recently enacted requires the reporting of all cases of tuberculosis to the Health Department, fumigation of the place of abode of each case after its termination or removal, and the distribution of instructive literature.

This ordinance became operative about two years ago, and upon a carefully studied estimate, I am enabled to state at this time that about fifty per cent. of all cases occurring in the city are being reported. Previously our statistical records showed no entries of tuberculosis at all except those copied from death certificates in the mortuary office. This would show that in two years the report of living cases of tuberculosis has gradually arisen from nothing to the percentage figure of 50, and while the increase is slow, we confidently hope to show in the near future a more dignified and reasonable percentage in reports. It would probably surprise most of you to know how difficult a matter it is to fully enforce a law of this kind. Such reports are distasteful to the physician and abhorrent to the family of the patient, as well as the patient himself, all of which when combined with the natural carelessness of the profession with regard to matters of statistical value and the importunities of the family for delay or negative action, militate heavily against perfect returns. In calling the profession's attention to the ordinance requirements concerning tuberculosis the Health Department, as in many other matters, sent out many circular letters with copies of the ordinance so that no one might plead ignorance of the law as an excuse when the more drastic measure of prosecution in police court for non-compliance become necessary. Legal proceedings are being instituted whenever the evidence is convincing of wilful negligence, and with decided effect upon the returns. Until the medical profession realizes the necessity for these reports in the formation of complete statistical records, which are so important in the work of relief and prevention of tuberculosis, and will earnestly coöperate with the health authorities in their efforts, a reasonable fulfillment of their duties toward the public and the ultimate control of this miserable disease will never become a fact. Our ordinance requirements should go a step farther and with its present recognition of tuberculosis as an infectious disease should delegate authority to the health officials to apprehend and provide proper hospital or sanitarium treatment whenever in their judgment the patient or his friends are unable to provide the necessary medical care and sanitary surroundings. Such a

measure would not only insure more favorable conditions for the patient himself, but would also be an effective means against the dissemination of tuberculosis among his associates.

The ordinance above referred to requiring fumigation of premises after tuberculosis cases, provides that it may be done under the direction of the physician in charge, but in accordance with a method approved by the Health Department; or by the Health Department itself, upon request by either the physician or family. Bona fide evidence, however, must be given that a case has actually existed on the premises requested fumigated before the Health Department will act. This rule is necessary for the Department to prevent imposition on the part of many who make the request for the simple purpose of general house cleaning where no contagious or infectious disease has existed.

The result has so far been that the Health Department has been requested to and has fumigated all such premises.

Instructive literature in dodger form has been ordered distributed by all the dispensaries and the sanitary division.

Every reported case is to receive by return mail these printed suggestions relating to proper food, personal hygiene and household sanitation.

The old booklet form of general instructions, in use until the present, has been found to be too cumbersome, expensive and incomplete of detail for this special distribution.

A bill providing for the medical inspection of schools was introduced at the last session of the Municipal Assembly but was never acted upon. Another has already been drawn up and is about to be introduced. The experience of other cities with medical inspection of their schools has conclusively shown the great value of the work by the early detection and the exclusion from the schools of children afflicted with contagious and infectious disease. None of the cases so detected escape report to the proper authorities, nor the usual quarantine regulations at their homes or elsewhere. Thus it is possible to prevent the spread of these diseases amongst school children, and as tuberculosis is, in St. Louis, declared by ordinance to be an infectious disease, there can be no doubt of the value of medical school inspection in limiting its spread.

The eleemosynary hospital facilities of St. Louis for the general care and treatment of tuberculous patients are all that could be expected of institutions of their kind. The City Hospital has a fire-proofed, well-ventilated and lighted building in which there are two spacious wards with southern exposures devoted to tuberculous patients. Connected with each ward are several private rooms, baths and lavatories.

The patients receive every care and comfort possible to the institution. The average number of patients under treatment there from day to day is between forty-five and fifty, aside from a few that make their regular visits to the so-called out-door clinic located at the hospital. This clinic has recently become a part of the hospital work.

At the Female Hospital there is also maintained a special ward for this class of patients, and while this institution is not of the modern up-to-date type, yet this ward serves its purpose well, and has the capacity to comfortably accommodate from fifteen to twenty souls.

Located upon the top floor of the new building at the Poor House a large ward has been especially provided for the segregation and treatment of tuberculous paupers. This ward is isolated from the rest of the building, and as it stands with its baths, lavatories, large windows, broad veranda, thorough ventilation and sun exposure, is excelled by few. About twenty-five is the usual number of consumptives to be found on this floor.

The work done by the city for many years along the line of the general care and treatment of the tuberculous poor has no doubt far exceeded the limit placed upon it by the average citizen. Yet when we are confronted with the fact that pulmonary tuberculosis claims in death from among our citizens seventy-two per cent. of the fatalities occurring from all the infectious and contagious diseases combined, you cannot but agree that the time is, and has for a long time been, at hand when the community should awake to the necessity for especial effort toward the limitation and control of this most insidious and subtle scourge of humanity.

At the last session of the Municipal Assembly of St. Louis an ordinance was enacted directing the Mayor to appoint a Tuberculosis Commission. This Commission has just been appointed, and its members were carefully selected from the view-point of their intellectual, business-like and public spirited qualifications. It is provided that the Commission's work be facilitated as far as possible by the coöperation of the Health Department. The work of this Commission is to study the existing conditions of the city in their relation to tuberculosis, to solve the problem of the best method for the limitation and control of the disease, and to report its findings with recommendations. When the Commission's labors have come to a close it is to be devoutly hoped that its recommendations may mean a solution of the problem, and that prompt action may be taken thereon.

While our hospitals are doing well toward the patients assigned to their care, they are nevertheless not the most proper places for the treatment of tuberculosis. It is high time that we were specializing in our battles against this "great white plague," and the idea is well supported by the creditable results shown by the work of special clinics for lung diseases and tuberculosis sanitariums wherever found.

We have tested the special clinic in St. Louis and have been rewarded with flattering results in a remarkably short space of time. We want more such clinics and we want a modern tuberculosis sanitarium for St. Louis situated somewhere in her handsome suburbs beyond the limit of smoke and noise. We are faithfully working for both, and we have reasonable hope of possessing both in the near future. With this much

accomplished, and with the enactment of a law empowering the health authorities to properly regulate the conduct of those afflicted, we will have at least made a beginning in the work of the relief and prevention of tuberculosis.

DISCUSSION.

Dr. L. M. Warfield, St. Louis: It seems needless to dwell on the necessity for the early diagnosis of tuberculosis after what has been said this afternoon, but it is always well to say over and over again that the most important thing is the early diagnosis. While the finding of the tubercle bacilli is always evidence of the presence of the disease, because one does not find it in the sputum it does not mean that the patient is not tuberculous. A specimen may be sent to the bacteriologist and the report may come back from the laboratory after a dozen such examinations, "Bacilli not found," and still the individual have tuberculosis. We cannot emphasize too positively that the bacilli do not have to be found to make a positive diagnosis of tuberculosis. Of the newer methods of diagnosis, hardly a magazine is read that does not contain an article on the cutaneous or ocular reaction. I have used the cutaneous reaction more than the ocular reaction, for the eye is too delicate an organ to be played with. I used a dilution of 1 to 4 for the cutaneous tests. My experience was that cases of tuberculosis all react. Some cases that did not show tuberculosis clinically were subjected to the test and some reacted and some did not. Some of those that reacted were old, cured cases of hip disease, or disease of the spine. It seemed to me that the value lay in the negative result. If one got the reaction one could only say that tuberculosis was probably present in the system somewhere. If there was no reaction, and the symptoms were not definite, it would be safe to say that the patient did not have tuberculosis. I found that those people who were very well indeed, who had been cured of a tuberculous condition of the hip, for example, would give the reaction. A strong reaction would indicate that the patient had in his body antibodies sufficient to counteract the infection. In the ocular tests I have used a 2 per cent. and a 4 per cent. solution of the old tuberculin in 3 per cent. sterile boric acid solution and it seemed to me there were advantages in this method. It keeps well, I have had a beautiful reaction after keeping it four or five weeks. I have never seen a case of tuberculosis that did not react to a 2 per cent. instillation into the eye. I have never had any serious trouble from the ocular reaction. An interesting point has come up and it is this: take fifty children from four to twelve or fourteen years and of those fifty children about 25 per cent. will react to the cutaneous tuberculin test. These children were healthy, apparently, but often there was a history of parental tuberculosis or they had been exposed to tuberculosis. On the contrary not a single case reacted to the eye test. I believe the eye test is more apt to show the presence of an active tuberculosis and the skin test is more

apt to show the presence of a latent or healed tuberculosis. This is simply one of the many things that may be employed to clinch the diagnosis. As to the Roentgen ray in the diagnosis, my experience has not been sufficient to enable me to speak with authority on the subject, but it tends to get us away from the old methods of diagnosis, auscultation and percussion. I do not believe we should trust too much to the x ray findings. After other means have been exhausted, then we may employ this method as a final test. It will only show infiltration, which may be actually something other than tuberculosis at the apex of the lung.

Dr. John Green, Jr., St. Louis: We are told that the instillation of tuberculin should be made into a conjunctiva that is absolutely normal. Now the determination as to what constitutes perfect normality is difficult. In the first place there should be a direct comparison between the color of the conjunctiva of each eye. When slightly congested the mere mechanical irritation of the drop may produce a reaction where there is in the body no tuberculosis whatsoever. A case in point will illustrate. A young man had a central lesion of the cornea which appeared to be tuberculous. The other eye was slightly congested. I used a one per cent. solution of tuberculin according to Calmette and got, in twenty-four hours, a reaction indistinguishable from the typical ophthalmo-reaction. Following a von Pirquet injection I failed to get any reaction, and I was then inclined to doubt the presence of tuberculosis. I put the patient on potassium iodide and the corneal infiltrate melted away like snow before the sun. It is true that in general the reaction is not harmful; yet it may, in exceptional cases, prove distinctly harmful. In a strumous child we may get the development of an interstitial keratitis or even, occasionally, the development of a corneal ulcer. Cases of follicular conjunctivitis following tuberculin instillation have gone for weeks unrecognized because the physician failed to evert the lids.

Dr. G. S. Dowell, Braymer: I remember one young lady who went to Phoenix, Arizona, after having had a number of hemorrhages and all the signs of tuberculosis. She had one hemorrhage after reaching Arizona. It was the hot season and she could do nothing but rest in the afternoon. She remained there for eighteen months and then we thought it was time for her to come home on a visit. She came home, had no more coughs or sweats, had regained her normal weight, and has been well for two years. As to what boards of health may do, some six months ago in our little town I read an article before our city council in regard to spitting on the sidewalks and in public places. In consequence an ordinance was enacted prohibiting spitting in public places. We had always had places there where men congregated on the sidewalk and made those places look like cuspidors. We have stopped it and intend to keep it stopped, if we get enough fines to build a hospital. It is the duty of every man to exercise his power to help his fellow citizens. Write a paper on school sanitation and read it before your

school board. It is through these efforts that we will stamp out the great white plague.

Dr. William Porter, St. Louis: The education of the people is the main factor in combating tuberculosis. When we began the public campaign in this state, I wrote to Dr. Trudeau asking him to send me, out of his large experience, some working suggestion for our early efforts as an organization. He replied (in effect), "Educate the people to a knowledge of the vital and economic loss by tuberculosis. They will soon devise ways and means." In Missouri the educational work is well advanced and our State Sanatorium, Mt. St. Rose and many clinics, as well as laws in force, are evidences that the problem is being worked out.

Regarding the use of tuberculin either for diagnosis or treatment, I am willing for the present to leave that to others. Formerly I used it in a somewhat large series of cases but am convinced that, even with every known precaution, I did some harm. In the most of cases as they come to us—in the large majority—we can make the diagnosis without tuberculin. The stethescope is better than the syringe. In the closed or undetermined stage, if the physical signs are not pronounced enough upon which to found a diagnosis, I am content to care for the patient giving him the benefit of the doubt until further developments. No time is lost—no harm is done.

Should tuberculin be used it should be with the greatest care. Again quoting Trudeau: "The physician who in using tuberculin neglects the rise of only one-tenth of a degree is likely to have trouble." As a rule the consumptive has foci of tuberculin within the lung and the better and main care is to guard against a too rapid absorption of what is already threatening him.

I would emphasize the value of extreme care and the observing of any marked departure from symmetry in size, form or movement of the chest surface. We should also remember that the different physical signs are the expression of definite, pathologic changes, and read these changes through the signs. Especially should we note the circumscribed, small, rough bronchial sound, with a little change in pitch and possibly extended exspiratory murmur.

Careful exploration of the posterior chest should always be made with comparison of the two sides. It is here we get some of our most important early evidence.

It is not necessary that consumptives should be isolated. The consumptive is harmless if he is intelligent. At Mt. St. Rose, where we have had 1600 cases in five years, we do not know of a single case that has acquired the disease either in the staff or the attendants. This is the record at other institutions where they have learned the easy methods of prevention. I believe that Dr. Brown will tell you he feels safer at Mt. Vernon than in some hotels.

We must teach the people that the presence of this disease is a grievous burden. This state can not afford to lose five thousand of its

best citizens and twenty-two millions of dollars every year from this cause. It is within our power to diminish this result at least one-half. Think of the responsibility that rests upon you in dealing with this great question. I want to thank all of you who have aided this cause in the past year. I have found everywhere willing workers, some who are willing to give up their practice to go to the legislature next year to help in this work. Some of our best members are sacrificing themselves in this cause. These men must be backed by your influence.

Dr. W. L. Bosius, Gallatin: I am the medical member of our health board in my county and the president of our local society. We have a young attorney there who is very active and he is now every week firing something into the newspapers getting the people ready for the open meeting of the county society the first Tuesday in July, when we will have papers on hygiene. There will be papers on school hygiene, the early diagnosis of tuberculosis and several other papers. After all, the court of final resort is the public, and the public must be educated if you want to get the right decision, and the public must be educated through the efforts of the physician who takes the matter in hand. I remember a story told by a doctor of Poplar Bluff. A physician was called to see a man of affairs and after the examination the patient was told that he would soon pass away from tuberculosis of the lungs. He replied: "I don't believe it," and sent for Doctor Number Two, who said to the patient: "You have nothing the matter with your lungs, but with your liver." A few months later the patient sent for the preacher. Number One said he wanted an autopsy and it was granted and both physicians were present. A part of both lungs was found involved, but the liver was perfectly normal. Number One said: "I told you so," and Number Two replied: "You doctored his lungs; I doctored his liver. If you had done as much for his lung as I did for his liver, he would be alive yet." Doctors like Number Two will not count for much after we have the people enlightened.

Dr. Browning, Los Angeles, California: California, as you all know, is an open sanatorium. Every word Dr. Porter has said is as we see it, especially in regard to the segregation of these patients. It is a matter of education and protection wherever they may be, whether in sanatoria or not. They may be treated, and many must be, in places other than sanatoria. As to diagnosis, the patient should go to the physician early, but on the other hand the physician must be educated to make an early diagnosis. Those of us who make a specialty of this subject know how many patients have gone to the physician requesting such an examination when it has not occurred to the physician that such a condition exists. Strip your patient and examine every part of his chest and when that is done you will be able to make the diagnosis most frequently without any other means of diagnosis. As to the tuberculin test, the temperature reaction is not so important as the finer reaction which you must watch for with your stethoscope. As to the Calmette reaction,

I am a little afraid of that and my friend Dr. Cooper, who has recently returned from Vienna, tells me that he saw one case in which an eye was lost as a result of the test.

Dr. R. W. Mills, Webster Groves: It is common to maintain that there are many cases of early pulmonary tuberculosis in which the tubercle bacillus cannot be found. I have made hundreds of examinations and I can not recall a single instance where it could not be found after careful examination in which the case subsequently proved tuberculosis. I have found it after eighteen examinations had been made on as many consecutive days. I can not see that there is any reason why in early tuberculosis the bacillus should not be found. The early lesion is superficial and I do not see how such a lesion could exist without throwing into the sputum tubercle bacilli. Another thing is the making of sputum examinations by the country practitioner. It is a difficult thing to carry a microscope around to make a blood count, and no man who has been out of a laboratory for a few months will risk making a differential diagnosis in a suspected carcinomatous condition, but no man can fail to recognize the tubercle bacillus when he sees it.

Dr. J. O. Young, Ozark: This is the first state meeting I have ever attended and I do not know how to express my appreciation of what I have heard and learned. When I go home our society is going to reorganize, elect new officers and begin the fight against tuberculosis as we have never fought it before. One of the gentlemen struck the keynote when he spoke of reading papers before the city council. I intend to follow his advice when I return home, and do what I can to have the custom of expectorating in public places stopped.

Dr. L. I. Matthews, Joplin: There are a few things I would have liked to hear spoken of, *e. g.*, the method by which tuberculosis is spread. Several months ago I received a request from a dairyman to inspect his herd. The stables and everything about them were in good condition and the animals were sleek and fat. Within the last two months the state veterinarian has inspected them and found twelve of those cows suffering from tuberculosis. They were killed and the post mortem confirmed the diagnosis. Now, what is the result? The dairyman has lost twelve of his cows and the State does not give him a dollar for his loss. There is a difference of opinion as to whether tuberculosis in cattle may be transmitted to man. If it is true that the disease may be thus transmitted, then unquestionably those cows should have been killed. But as great a man as Prof. Koch has said that bovine tuberculosis can not be transmitted to man. If it is true that man may be infected by bovine tuberculosis, then infected cattle should be killed, but the doctors of this State ought to demand that when private property is taken for the advantage of the State, that the man who suffers this loss should be pecuniarily reimbursed.

Dr. McAlester, in closing: In regard to the ocular test, after you have used tuberculin in one eye, you should make the second instillation

in the opposite eye, for, even in a normal individual when you make repeated applications you will get a slight reaction. After instilling tuberculin in the eye, you can get the ocular reaction following a subcutaneous injection. Another thing, no one should use tuberculin in an eye that is not absolutely normal. Twenty-five per cent. of the children giving this reaction give a history of having lived with tuberculous people though physical evidence of tuberculosis is lacking.

Dr. Porter: Where a patient intelligently understands conditions and is amenable to the suggestions of his physician he is harmless. It has been shown that under proper conditions the bacillus can live for days. How long it may live on the sidewalk we do not know, but it will live long enough to be a danger. It has been conclusively shown that wherever there has been a limitation of promiscuous spitting for any length of time, there has been a decrease in the number of cases of consumption.

The question of bovine tuberculosis is yet *sub judice,* with the preponderance of evidence in favor of bovine infection in the human being. Enough has already been shown to make the question one of municipal value and one in which our State veterinary department may become an additional factor in stamping out tuberculosis.

Dr. Engelbach, in closing: It was not the intention that this paper should convey the idea that the x rays should displace physical findings in the diagnosis of tuberculosis of the lungs. This method of examination was advocated to get a more accurate idea of the extent and character of the lesion, and a confirmation of suspect lesions. It is therefore merely an adjunct to the other means of examinations. As to the limitations of the new tuberculin reactions, Dr. Shankland and I have over 1,000 tests at the St. Louis City Hospital, and our findings confirm many of the later reports on these reactions. The conjunctival reaction is by no means free from danger. It has been proven that this reaction has produced serious lesions in practically normal eyes. We found that the average negative reaction (cutaneous and conjunctival) in positive tuberculous cases range from 30 to 40 per cent. Other diseases not tuberculous gave practically the same number of positive reactions as suspected tuberculous cases. We obtained positive reactions in about 57 per cent. of the cases in apparently normal individuals with either one or the other of these reactions. In our work these reactions bore no relation to the activity or extent of lesions. For instance, the conjunctival reaction would be positive and the cutaneous reaction would be negative in a practically normal individual. This unexplainable variation of the reactions also occurs in tuberculous and non-tuberculous cases. We concluded from this work and review of the literature up until that time that the value of these reactions as diagnostic agents in adults was greatly limited. It is very probable that the cutaneous reaction is of great value as a diagnosis sign in tuberculosis of children.

Dr. McN. Miller, in closing: It is reported from the Hygienic Laboratory, Public Health and Marine Hospital Service, that the milk from 11 per cent. of the dairies furnishing milk to the Washington market contains tubercle bacilli. Butter is also infected. Dr. Lucky believes that the owners are not sufficiently remunerated for their loss when tuberculous cows are killed, and that is what he is striving to correct.

Paper Money is Popularly supposed to be a carrier of infectious diseases. No doubt microbes do find a resting place on many of the bills now in circulation, but investigations which have been conducted at the research laboratory of the New York Board of Health indicate that although paper money is by no means free from bacteria, it is, nevertheless, not quite so prolific a breeding ground as may be supposed. On clean bank bills an average of 2,350 bacteria were discovered. On soiled bills the average was 73,000. This investigation was made some years ago. Its results have now been checked by Warren W. Hilditch of the Sheffield laboratory of bacteriology and research at Yale. The dirtiest bills which banks and railways could place at his disposal showed an average of only 142,000 bacteria for each bill. The lowest was 14,000; the highest, 586,000. Curiously enough, the cleanest looking note was charged with 405,000 bacteria, and the dirtiest with 38,000, which seems to prove that there is no necessary connection between dirt and bacteria. Mr. Hilditch finds that guinea pigs inoculated with these bacteria contracted no disease, which would mean that money bacteria are not necessarily virulent.—(*Scientific American.*)

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, Chairman. M. B. Clopton, M. C. Shelton.

EDITORIAL

"NEW" TUBERCULOSIS CURE.

Following close upon adjournment of the International Congress on Tuberculosis at Washington—a convocation composed of men who have devoted many years of study and research into means for preventing and curing tuberculosis, the arch-enemy of mankind,—we view as a hopeful sign of the times the paucity of alleged tuberculosis cures fobbed off on a guileless public. For if ever time and tide rolled in unison to carry successfully onward any plan promising quick relief from this disease, the present moment seems fit to launch the project. The receipt of the following letter, therefore, created no large measure of surprise in us and we publish it for the benefit of those who may not as yet have heard of the marvelous discovery which the writer of the letter promises shall prove a boon to suffering humanity:

November 19, 1908.

Dear Sir:

Over 200,000 people die of consumption in the United States every year. 480 families will gather about the caskets of their dead within the next twenty-four hours. Of the deaths between the ages of fifteen and forty-five, one-third are from consumption.

Statistics show that one-seventh of the deaths are from consumption. Its ravages head the death list in every city in the United States.

The germs of tuberculosis lie beneath your feet; they fill the air that is wafted into your face. Water and food are conveyers of this insidious foe.

The unsuspecting are promulgating the seed by expectoration on the streets and sidewalks, in cars, and even on the floor of their homes, seeds which are scattered among thousands by the winds.

Dr. Judd Q. Lloyd, of 548 De Baliviere Avenue, has, after twelve years of hard work, discovered a cure for consumption. He has on file thousands of letters from physicians and others which will prove the above statement. He has just organized a company called the Re-Stor-All Chemical Company, with $200,000 capital. All Common Stock, no Preferred, full paid and non-assessable, $10.00 per share.

Dr. Lloyd advises that he expects to spend $3,000 to $4,000 a month advertising in newspapers and magazines, selling direct to the public. There is about $40,000 already sold, and he does not need all cash at this time, therefore, selling stock at 10% cash and 10% monthly. You will find on the back of this, a letter from Judge Geo. B. Sidener, with reference to his experience with Re-Stor-All. Enclosed is a subscription blank which kindly fill out and return for the amount of stock you want.

I have made a personal investigation of the merit of "Re-Stor-All" and believe it a positive cure for Consumption.

A free write-up in the "Star," which we are mailing you under separate cover, shows actual Photos taken in action.

Respectfully,

(Signed) JOHN S. POINDEXTER.

On the back of this interesting document a laudatory account of the infallible virtues of this new-found remedy is printed over the signature of one of our legal lights. It reads as follows:

Oct. 27th, 1908.

J. Q. Lloyd Chemical Co.,
St. Louis, Mo.

Gentlemen:

At the request of one of your stockholders, I have given your Re-Stor-All a thorough trial for tuberculosis, which I contracted some four years ago after a severe attack of pneumonia.

I spent a large amount of money in traveling and doctoring, when last July my physician decided that my existence would end inside of two months. I had lost my voice entirely and was unable to get out of bed without assistance; in fact, I was wishing for the end to come as rapidly as possible. On the 26th day of July, of this year, I started on the first bottle, taking it every hour, sixteen hours per day, and living out of doors in a tent at the same time. At the end of the first week my appetite, which I had lost, began to get good, and in two weeks I was eating five times a day. I have taken several bottles in the past three months and have gained sixteen pounds, and think without a doubt that Re-Stor-All has saved my life.

I cheerfully recommend it to any one who is suffering from tuberculosis, believing it is the only medicine that will effect a cure, and believe without a doubt it is one of the greatest blood purifying medicines that was ever manufactured.

I advised my Mother, who is 70 years of age, and who was afflicted with paralysis in one side of her face and her right arm, for 20 years, to try Re-Stor-All. Her face, which had been drawn to one side, and one eye-lid, which had been drooped down, and also her right arm, was completely cured by the use of one bottle.

You have my consent to use this letter or myself as reference at any time you may see fit. Yours truly,

(Signed) GEO. B. SIDENER.

Further to impress upon the astonished mind of the recipient of these remarkable letters the epoch-making discovery that has burst upon the medical horizon, a page write-up in the St. Louis *Star* is laid before him,

wherein is described in pathetic detail the travail of Mr. Lloyd in his humanitarian pursuit of a cure for consumption.

Having solved this great problem,—a problem that has agitated many of the most brilliant minds of the century and prompted the expenditure of millions of dollars by national grant in various countries of the world,—at least to his own satisfaction, and to the satisfaction of the bright lights in local society who signed the letters reproduced above, the discoverer, with a truly philanthrophic spirit, invites everybody to participate in the fruits of his labor, and offers us an opportunity to share in the profits of the great organization that he has founded for the purpose of distributing this highly important remedy throughout the universe. But the delicate manipulation of the "ic" acids and alcohol to prevent an explosion when ingested—a dire result that would follow if these articles were mixed in any other manner than that evolved by the ingenuitive brain of Mr. Lloyd—occupies so completely the time and attention of that gentleman that he must, perforce, leave in the hands of others the small detail of distributing the stock of the company.

That Messrs. Poindexter and Sidener are entirely sincere in their protestations of belief in the exalted virtues of this remedy for tuberculosis cannot be doubted, for the former is striving most strenuously to dispose of $200,000 worth of the stock of the company, and the latter has, he declares, been cured of the dread malady, after having given up all hope, while his mother, now passed seventy years of age, was cured of a paralysis of the face and arm.

That legal talent, such as is evidenced in Judge Sidener, is large enough to embrace the therapeutic value of some new drug, should not be at all surprising considering the many educative factors which enter into that profession, but when the legal mind can grasp not only the possibilities of a new preparation for the cure of consumption, but sees in it also a potent remedy for paralysis, we are reminded of what Dr. Johnson said when moved to voice his opinion concerning a certain barrister: "Far be it from me, sir, to speak evil of any man behind his back, but I believe him to be an attorney."

A COMMENTARY.

That the spirit of humanitarianism which has pervaded the practice of medicine from time immemorial has been a misunderstood and much maligned section of the code which governs the conduct of the medical practitioner in his relations to patients and the public, is well-known; and we have become so inured to this state of affairs that the expectation of a just perception of this basic principle in medicine from

those outside the profession, has well-nigh died within us, though this has not prevented us from proceeding along the path which our precepts and principles have taught us to be the right one for a truthful interpretation of these tenets. Yet every act of the physician, when in the presence of sickness and suffering, is prompted by charity and benevolence, and the frequent sacrifices of self-interest, both financial and physical, which a faithful adherence to these principles enforces, has not dulled the spirit to persevere in doing good. It is, therefore, somewhat in the nature of a vindication of the soundness of these principles that we learn of the existence of a society in New York which undertakes to assist poor people who have occasion for the law but are unable to afford the remedy. Such cases are handled by this society at a minimum of cost to the client (23,000 cases thus far managed have been handled at an average cost of $1.18).

This situation has provoked a comparison between the legal and medical professions by the New York *Evening Post* that reflects rather more credit upon the medical than the legal profession. "In most quarters," say the *Post,* "the profitable tradition is kept alive that it is undignified in a lawyer to accept less than $10. He who takes less invites the pettifogger's reputation. The medical profession is now almost completely delivered from such superstitions; fees are gauged with reference to the actual costs and to the patient's purse. * * * * The physician whose doorbell the poor man fears to ring is fast becoming an exception. But how many attorneys earning from $10,000 to $100,000 a year are noted for the geniality with which they greet the laborer beseeching the collection of his wage from a thieving employer?"

EDITORIAL NOTES

An English-Chinese Lexicon of Medical Terms, prepared by Dr. Philip B. Cousland, has just been published in Shanghai. The author although an Englishman by birth, has based his book largely upon the medical dictionary of Dr. George M. Gould, of Philadelphia, a high compliment to American scholarship. Dr. Cousland has recently published a translation of Prof. Halliburton's edition of Kirkes' Physiology.

The Directory of the American Medical Association for 1909 will soon be ready for publication. The names of all members of county societies are printed in capital letters which at once distinguishes them from non-members of county societies. The names of members of the American Medical Association have the additional distinction of being marked with the insignia denoting such affiliation. Secretaries of county

societies should not overlook this in their efforts to induce eligible physicians to join the county society.

At a Meeting in Rolla recently, held under the auspices of the State Society for the Relief and Control of Tuberculosis, which was attended by a large number of physicians and others interested in the work of this organization, a committee was appointed to confer with the Phelps County Medical Society and accomplish plans for the organization of a local society for the prevention of tuberculosis. The Hon. A. P. Murphy, Congressman from that district, was appointed chairman of the committee which is composed of ten ladies and gentlemen.

The Reorganization of Montgomery County Medical Society will be accomplished on December 15th. On that date the district councilor, Dr. A. R. McComas will meet with the physicians of Montgomery County at Sullivan and perfect reorganization plans. We are glad to learn of this contemplated action and will welcome the affiliation of Montgomery County Medical Society. The eligible physicians of this county have too long been deprived of the benefits of membership in the State Association and the uplifting influence which comes from organized efforts. We shall look forward to the receipt of reports of the meetings for publication in the Journal.

Dr. J. A. Harris, of Mt. Vernon, has issued a pamphlet entitled "A Plea for the Missouri State Sanatorium," in which he makes a strong argument for immediate action by county medical societies to assist the officers of the State Sanatorium for Tuberculosis in securing a liberal appropriation from the legislature for the maintenance of the Sanatorium. Examples have multiplied during the past few years showing that it is a profitable investment for the State to be liberal with its funds for the conservation of the health of the people. Dr. Harris adduces additional evidence which should convince our legislators of the economy of being liberal with funds for the maintenance of the Sanatorium at Mt. Vernon.

Dr. G. A. Jordan has been appointed assistant health commissioner of St. Louis in the place of Dr. William Winn, resigned. Dr. Jordan was formerly chief dispensary physician. He is an experienced and capable public health official and possesses marked executive ability. In 1894, while holding the position of chief dispensary physician, a severe out-break of smallpox occurred in St. Louis, at which time he demonstrated his efficiency by limiting the spread of the epidemic. Dr. Winn has been connected with the Health Department for the past two years. He was an energetic and capable officer, indefatigable in his work of maintaining proper sanitary conditions in all parts of the city. He will resume private practice in St. Louis.

New Members Missouri State Medical Association.

Baird, Jesse P., Marionville.
Baron, Jules, 3357 California Ave., St. Louis.
Benham, Parkville.
Bles, Victor A., 733 Metropolitan Bldg., St. Louis.
Butler, Thomas E., Kirksville.
Byrd, R. Lilburn, 1000 Bittner St., St. Louis.
Conger, D. W., Altona.
Drechsler, Louis, 2701 Blair Ave., St. Louis.
Graves, Spencer C., Lister Bldg., St. Louis.
Hanser, Herman A., 3651 Delmar Ave., St. Louis.
Hawkerson, W. O., Roanoke.
Herrick, Harold C., 5605A Easton Ave., St. Louis.
Hull, Lafayette, Marquand.
Kearney, Elmer, New Point.
Kerwin, William, 3635 Russell Ave., St. Louis.
McClanahan, J. W., Forbes.
Nicks, Harry G., 933A Goodfellow Ave., St. Louis.
Prichard, James B., 3661 Finney Ave., St. Louis.
Schulte, Francis A., City Poor House, St. Louis.
Scott, Olive D., Century Bldg., St. Louis.
Smith, J. M., R. F. D. No. 5, Butler.
Taylor, Herbert, New Bloomfield.
Wallace, G. W., Bertrand.
Willis, J. B., Weston.
Wolter,Otto L., 1446 Blair Ave., St. Louis.

Changes of Address.

Dr. J. Q. Adams, from Belleview, Mo., to Mullen, Nebr.

Dr. V. P. Blair, from Linmar Bldg., to Metropolitan Bldg., St. Louis.

Dr. Theo. Blakesley, from 100 Rialto Bldg., to 515 Commerce Bldg., Kansas City, Mo.

Dr. C. E. Fronk, from Maryville, Mo., to Army Medical School, Washington, D. C.

Dr. Thomas E. Graham, City Dispensary, St. Louis, to Chula, Mo.

Dr. L. T. Guggenheim, from 4058 Lindell Blvd., to 3894 Washington Ave., St. Louis.

Dr. M. A. Hanna, 100 Rialto Bldg., to 515 Commerce Bldg., Kansas City.

Dr. N. O. Harrison, from Rialto Bldg., to 515 Commerce Bldg., Kansas City.

Dr. R. T. Henderson, from Schumer Springs, Mo., to Jackson, Mo.

Dr. Louis E. Missimore, from 4107 Finney Ave., to 4869 St. Louis Ave., St. Louis.

Dr. J. E. Neely, from Van Cleve, Mo., to Calhoun, Mo.

Dr. Allen Porter, from Rialto Bldg., to 515 Commerce Bldg., Kansas City.

Dr. Paul M. Rothman, from 1146 N. 11th St. to 1446 N. 11th St., St. Louis.

Dr. E. H. Skinner, from 212 Rialto Bldg., to 621 Commerce Bldg., Kansas City.

Dr. D. Clay Todd, from 4115 Finney Ave., to 1231 N. Taylor, St. Louis.

Dr. E. J. Wallace, from Centralia, Mo., to 421 Atlantic Ave., Long Beach, California.

Dr. Marvin Winn, from Ilasco, Mo., to Hannibal, Mo.

OBITUARY

ARTHUR G. RANDOLPH, M. D.

Dr. Arthur G. Randolph was born in Carthage, Illinois, January 13, 1876; died in Kansas City, November 8, 1908; age 32 years. Dr. Randolph obtained his education at Lake Forest University and the University of Virginia, taking his medical degree in Rush, where he graduated in 1899. Immediately following his graduation he located at St. Joseph, Mo., where he practiced for 18 months; during this time he was medical examiner for the Burlington. From St. Joseph he located at Grandon, Mo., and after practicing there for one year changed his location to Kansas City.

The following resolutions were adopted by the Jackson County Medical Society:

Again the grim reaper has invaded the ranks of our Society, bringing us to realize that "In the midst of life we are in death."

The mantle of grief overspreads Jackson County Medical Society, and we mourn the loss of our dear friend and fellow-practitioner, Dr. Arthur G. Randolph, whose demise occurred at his home in our city on November 8th, 1908.

Be it resolved, that we extend to the bereaved family our deepest sympathy, with the assurance that we mourn with them, and that we will ever cherish the memory of the loving soul which has returned to its Maker.

Be it further resolved, that a copy of these resolutions, expressive of our sympathies be spread upon the records of this Society, a copy be furnished the Journal of the Missouri State Medical Association, and a copy be furnished the family of our deceased brother.

JAMES THORNTON MATSON, M. D.

Dr. James Thornton Matson was born near Frankford, Pike County, Missouri, December 1st, 1821, son of Enoch and Jane Shobe Matson, died at his home near Louisiana, Mo., October 22d. He was educated in the primitive schools of that day and lived with his parents on the farm until his majority. He followed farming until 1847, when the gifted Dr. Jno. C. Wilborne located at Frankford and prevailed on him to study medicine under his preceptorship. He attended two courses

of lectures in the Missouri Medical College in St. Louis, graduating in 1849. He practiced one year with Dr. Wilborne, then located at Saverton, Ralls County, where he enjoyed a large and lucrative practice until 1864, when he gave up medicine and with the late James V. Rogers, of Palmyra, purchased the Broadway Stock Yards in St. Louis. In 1869 he sold out his stock yards and moved to his farm in Pike County where he lived continuously until his death.

Dr. Matson was elected a member of the Missouri Constitutional Convention of 1861 representing Marion, Ralls and Monroe Counties. He was recognized as a man of more than ordinary ability; what he lacked in book learning was fully compensated for by his strong native intellect. He was married in 1849 to Elizabeth Virginia Donnelly, daughter of Colonel Peter Donnelly, of Tennessee.

CONSTITUTION AND BY-LAWS
OF THE
MISSOURI STATE MEDICAL ASSOCIATION.
ADOPTED 1903.

CONSTITUTION.

Article I.—Name of the Association.

The name and title of this organization shall be the Missouri State Medical Association.

Article II.—Purposes of the Association.

The purposes of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Missouri, and to unite with similar Associations in other States to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

Article III.—Component Societies.

Component Societies shall consist of those county medical societies which hold charters from this Association.

Article IV.—Composition of the Association.

Section 1. This Association shall consist of Members, Delegates and Guests.

Sec. 2. Members. The Members of this Association shall be the members of the component county medical societies.

Sec. 3. Delegates. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

Sec. 4. Guests. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work for that Session.

Article V.—House of Delegates.

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, and (2), *ex-officio*, the officers of the Association as defined in this Constitution.

Article VI.—Sections and District Societies.

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

Article VII.—Sessions and Meetings.

Section 1. The Association shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members, delegates and guests.

Sec. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

Article VIII.—Officers.

Section 1. The officers of this Association shall be a President, five Vice-Presidents, a Secretary, a Treasurer, a Chairman and Vice-Chairman of each Section, a Secretary of each Section who shall be an Assistant Secretary of the Association, and twenty-nine Councilors more or less, as shall be determined by the House of Delegates from time to time.

Sec. 2. The President and Vice-Presidents shall be elected for a term of one year. The Secretary and the Treasurer shall be elected by the Council at its annual meeting and each shall hold his office for one year. The Councilors shall be elected for terms of five years each, being so divided that one-fourth of the number shall be elected each year. Section officers shall be elected by the members registered in the Section and shall serve for a term of one year each. All these officers shall serve until their successors are elected and installed.

Sec. 3. The Vice-Presidents, Councilors and Members of the Committee on Public Policy and Legislation shall be elected by the House of Delegates on the morning of the last day of the annual session, but no Delegate shall be eligible to any office named in the preceding section except that of Councilor, Chairman, Vice-Chairman or Secretary of a Section; and no person shall be elected to any office who is not in attendance on that annual session and who has not been a member of the Association for the past two years.

Sec. 4. The President and the Orators shall be elected by the General Assembly on the morning of the last day of the meeting.

Article IX.—Funds and Expenses.

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Sessions, for publication, and for such other purposes as will promote the welfare of the Association and profession.

Article X.—Referendum.

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members present, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

Article XI.—The Seal.

The Association shall have a common Seal, with power to break, change or renew the same at pleasure.

Article XII.—Amendments.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS.

Chapter I.—Membership.

Section 1. All members of Component Societies shall be privileged to attend all meetings and take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Association.

SEC. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a component society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the annual session in the respective bodies of this Association.

SEC. 3. No person who is under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION.

SECTION 1. The Association shall hold an annual session at such time and place as has been fixed at the preceding annual session or as fixed by this Constitution and By-Laws.

SEC. 2. Special sessions of either the Association or of the House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

CHAPTER III.—GENERAL MEETINGS.

SECTION 1. The General Meetings shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions, and, except guests, to vote on pending questions. Each General Meeting shall be presided over by the President, or in his absence or disability, or by his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations, and the entire time of the session so far as may be shall be devoted to papers and discussions relating to scientific medicine.

SEC. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

SEC. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

SEC. 4. No address or paper before the Association, except those of the President and Orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

SEC. 5. All papers read before the Society shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

CHAPTER IV.—HOUSE OF DELEGATES.

SECTION 1. The House of Delegates shall meet annually at the time and place of the annual session of the Association, and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations, and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But if the business interests of the Association and profesion require, it may meet in advance, or remain in session after the final adjournment of the General Meeting.

SEC. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 50 members, and one for each major fraction thereof, but each county

society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

Sec. 3. A majority of the registered delegates present shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

Sec. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public-health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate and research work, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

Sec. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

Sec. 9. It shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws.

Sec. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies, and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

Sec. 11. It may divide the counties of the State into Councilor Districts.

Sec. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

Sec. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Sec. 14. It shall present a summary of its proceedings to the last general meeting of each annual session, and shall publish the same in the transactions.

Chapter V.—Election of Officers.

Section 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

Sec. 2. The President on the first day of the annual session shall select a Committee on Nominations consisting of ten delegates, no two of whom shall be from the same councilor district. It shall be the duty of this committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the name of one member for each of the offices to be filled by the House of Delegates at that annual session.

SEC. 3. The report of the Nominating Committee and the election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

SEC. 4. Nothing in this article shall be construed to prevent additional nominations being made by members of the House of Delegates.

SEC. 5. Each section shall elect its own officers, consisting of a Chairman, a Vice-Chairman and a Secretary.

SEC. 6. Nominations for President and Orators shall be made in the General Assembly on the morning of the last day of the annual meeting.

CHAPTER VI.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

SEC. 3. The Treasurer shall give bond for the trust reposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any estate belonging to the Association, and execute the necessary papers; and shall, in general, subject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the Treasury only on a written order of the Chairman of the Judicial Council countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his books the assessments against each component county society at the end of the fiscal year, which shall be December 31st; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him.

SEC. 4. The Secretary shall attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the annual sessions. He shall keep a card index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient,

it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

SEC. 5. The Secretaries of the Sections shall act as Assistant Secretaries of the Association.

CHAPTER VII.—COUNCIL.

SECTION 1. The Council shall hold daily meetings during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the annual session of the Association for reorganization and for the outlining of work for the ensuing year. At this meeting it shall elect a Chairman and Secretary, and the latter shall keep a record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided. It shall be the Executive Committee of the Association and shall act for the Association during the interval between meetings.

SEC. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association.

SEC. 3. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

SEC. 4. The Council shall provide and superintend the publication and distribution of all proceedings, transactions and memoirs of the Society, and shall have authority to appoint an editor and such assistants as it deems necessary. Further, to facilitate this work, it shall be the duty of the Secretaries of the Sections, during each Annual Session, or as soon thereafter as practicable, to deliver to the editor, or his duly appointed agent, all such proceedings, reports, addresses, papers and other documents, as may have been ordered for publication. All money received by the Council, or its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Society, and all orders on the Treasurer for disbursements of money in any way connected with the work of publication must be indorsed by the Chairman of the Council and countersigned by the President and the Secretary of the Society. All matters of the Society pertaining to the expenditure of money for other purposes shall be referred, during the annual session, to the Council, who shall report upon the same within twelve hours, and if the House of Delegates orders the expenditure of money in connection with said report, the payment shall be made by the Treasurer as provided above. It shall be the further duty of the Council to hold the official bond of the Treasurer for the faithful execution of his office, annually to audit and to authenticate his accounts, and to present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Society during the year, and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary.

In the event of a vacancy in the office of the Secretary of the Society, or the Treasurer, the Chairman of the Council shall fill the vacancy ad interim until the next meeting of the Council.

SEC. 5. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the Chairman and Secretary of the Council, as such.

CHAPTER VIII.—COMMITTEES AND SECTIONS.

SECTION 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Nominations.

A Committee on Arrangement, and such other Committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of the Chairman and Secretaries of the various Sections. It shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates, or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which order shall be adhered to by the Association as nearly practicable.

SEC. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, State and national affairs and elections. Its work shall be done with the dignity becoming a great profession, and with that wisdom which will make effective its power and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such time as may be arranged during the annual session.

SEC. 4. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of Chapter V, Sections 2 and 3 of these By-Laws.

SEC. 5. The Committee of Arrangements shall consist of the component society in the territory in which the annual session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting places of the Association and of the House of Delegates and of their respective committees, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

SEC. 6. Duties of Officers of Sections. The Chairman shall preside at the meetings of the Section and shall perform such duties as usually belong to such an office, or as may be provided by the rules and regulations of the Section. The Vice-Chairman shall assist the Chairman in the performance of his duties and shall preside in his absence or at his request. The Secretary shall keep a record of the proceedings of the Section in a book provided for that purpose, and shall perform such other duties pertaining to his office as may be imposed by the rules and regulations of the Section and the By-Laws of the Association.

CHAPTER IX.—ASSESSMENTS AND EXPENDITURES.

SECTION 1. An assessment of two dollars ($2.00) per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county

society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on or before December 31st in advance of each annual session.

Sec. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or the House of Delegates until such requirements have been met.

Sec. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

Chapter X.—Rules of Conduct.

The principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

Chapter XI.—Rules of Order.

The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by a vote of its respective bodies.

Chapter XII.—County Societies.

Section 1. All county societies now in affiliation with this Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the Council, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only upon approval of the Council or House of Delegates and shall be signed by the President and Secretary of this Association. The Council or House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

Sec. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who is practicing, or who will agree to practice, non-sectarian medicine shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council and to the House of Delegates.

Sec. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

SEC. 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

SEC. 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferments shall be unstintingly given to such members.

SEC. 12. At some meeting in advance of the annual session of this Association each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty (50) members, or major fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association, at least ten days before the annual sessions.

SEC. 13. The Secretary of each county society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on or before December 31st, in advance of each annual session, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

CHAPTER XIII.—ENTERTAINMENTS.

No official entertainment shall be accepted by this Association during its annual sessions.

CHAPTER XIV.—AMENDMENTS.

These By-Laws may be amended at any annual session by a majority vote of all the delegates present at that session, after the amendment has laid upon the table for one day.

Emergency clause provides for immediately going into effect after adoption.

PROCEEDINGS OF THE THIRD ANNUAL MEETING OF THE MEDICAL ASSOCIATION OF THE SOUTHWEST AT KANSAS CITY, MO., OCTOBER 19TH TO 21ST, 1908.

Coates House, October 19th. A meeting of the Executive Committee with the following members present: Drs. B. J. Vance, L. H. Buxton, J. Johnson, G. H. Moody, W. H. Cary, Dr. John Punton, Chairman of the Committee of Arrangements, President Thomas E. Holland and F. H. Clark.

The Secretary presented the application of Dr. J. Ree Lytle of Kansas, who was not a member of the State Association because his County Association was not affiliated with the State Association, but asked membership in the Medical Association of the Southwest. Application was rejected and the Secretary instructed to write him that according to the constitution, none but members of the component State Associations in good standing could become members of this Association.

On motion of Dr. Punton, duly seconded and carried, the rule was adopted that during this meeting papers should be read alternately from each section.

The Chairman of the Committee outlined the arrangements made by the Committee for the meeting, including the social features, which included a dinner for the visiting ladies and their husbands; an automobile ride for the physicians as well as for the ladies, and a smoker for the men.

The Secretary-Treasurer presented his report for the year giving a brief synopsis of the effort made to reach and interest all the members of the profession in the five component states. The present membership numbers 580 which was a very satisfactory gain during the past year.

The financial report shows:

Total receipts during the year		$653.29
Total disbursements for same time		622.35
Balance on hand		$30.94
Total outstanding bills unpaid	$91.25	

An auditing committee consisting of Drs. E. H. Cary, John Punton and the Secretary were appointed to audit the books and accounts and after reporting that they found the accounts and books correct the report was accepted and ordered spread on the minutes.

A letter from Dr. Herbert L. Burrell, President of the A. M. A., regretting his inability to be present and wishing the Association a very prosperous year and a good meeting, was read and ordered read to the Association at one of the general meetings.

The president addressed the committee at length regarding the necessity for hearty coöperation on the part of the state journals if we

are to make this Association a success and was authorized to appoint a publication committee consisting of one from each state who is a member of the executive committee to devise ways and means to accomplish this result.

The meeting then adjourned to meet at 12:00 o'clock M. Tuesday, October 20th.

Casino Hall, October 19th, 2:00 P. M. General meeting called to order by the Chairman of the Committee of Arrangements, Dr. John Punton of Kansas City, Missouri, who announced that Mayor Thos. T. Crittenden who was to deliver the address of welcome was unavoidably detained, and then introduced Dr. Jabez N. Jackson who, in a few well chosen words, gave a cordial welcome to the visiting physicians and their wives in behalf of the profession, of Missouri and of Kansas City. Dr. Punton then announced that immediately after the adjournment of this session the visiting physicians were invited to become the guests of the physicians of Kansas City and enjoy an automobile ride over the beautiful parks and boulevards of Kansas City. He then introduced the President, Dr. Thomas E. Holland of Hot Springs, who called upon the following to respond to the words of welcome for their respective states: For Arkansas, Dr. C. T. Drennan of Hot Springs; for Oklahoma, Dr. A. K. West of Oklahoma City; for Missouri, Dr. C. W. Fassett of St. Joseph; for Kansas, Dr. Geo. M. Gray of Kansas City, Kan.; and for Texas, Dr. Joe Becton of Greenville.

Meeting then adjourned until 8:00 o'clock P. M.

Coates House, October 19th, 9:00 P. M. Meeting called to order by Vice-President S. S. Glasscock, who introduced the President, who delivered his annual address, in which he dealt particularly with the birth, origin and need of this association. Meeting then adjourned to take up the scientific program at 9:00 o'clock A. M., Tuesday morning.

The following were appointed as members of the Nominating Committee: From Kansas—Drs. Geo. M. Gray, C. C. Goddard, Noah Hays, Hugh B. Caffey and S. S. Glasscock. From Oklahoma—Drs. M. A. Kelso, A. K. West, H. C. Reed, R. V. Smith and S. M. Jenkins. From Texas—Drs. F. D. Boyd, Joe Becton, E. H. Cary, D. Strickland and Bacon Saunders.

Casino Hall, October 20th, 9:00 A. M. Meeting called to order by Vice-President S. S. Glasscock, who introduced Dr. Bacon Saunders. Dr. Saunders read the Chairman's address of the Section on Surgery, which was followed by the Chairman of the Section on General Medicine, Dr. F. B. Young, and who was followed by Dr. L. H. Buxton, Chairman of the Section on Eye, Ear, Nose and Throat. Dr. S. S. Glasscock then introduced the Hon. T. T. Crittenden, Mayor of Kansas City, who briefly welcomed the visitors to Kansas City.

Dr. Punton announced that at 2:00 P. M. the committee to entertain the visiting ladies would take them for an automobile ride around the boulevards, stopping for tea at the Country Club. Also that the visiting

physicians would be entertained with a smoker in the Coates House Tuesday evening at 8:00 P. M.

The Secretary reported that since the meeting of the Association at Hot Springs about 150 new members had applied for admission to the Society, all of whom represented themselves to be in good standing as members of their respective state association. Upon motion the reading of the names was dispensed with and the Secretary instructed to enroll them as members.

Coates House, Parlor A, October 20th, 12:00 M. Meeting of the Executive Committee called to order by the Chairman, T. E. Holland, with the following members present: G. H. Moody, John Punton, L. H. Buxton, B. J. Vance, Bransford Lewis, C. T. Drennon, LeRoy Long and F. H. Clark.

A free discussion regarding the work of the Publication Committee was indulged in and the president announced as the committee for the coming year the following: For Arkansas—Dr. C. T. Drennon. For Missouri—Dr. Bransford Lewis. For Oklahoma—Dr. L. H. Buxton. For Kansas—Dr. Geo. M. Gray. For Texas—Dr. G. H. Moody.

The publication committee was then instructed to meet at 5:15 Tuesday afternoon.

Committee then adjourned to meet Tuesday evening at 8:00 o'clock.

Coates House, October 20th, 8:00 P. M. Meeting of the executive committee called to order and the Secretary who had been authorized to prepare and present the report of the executive committee presented the report, which embodied the portions of the report already presented by the Secretary showing the present membership and the financial items; the report showed the effort made to interest all the county officers in the five states and the effort made to secure their attendance at this meeting and recommended that the effort be renewed next year; it also contained the report of the special committee appointed to attend the annual meeting of the A. M. A. at Chicago and ask for recognition as a Branch Association and reported that that had been formally promised by Dr. J. N. McCormick at that time. It also mentioned the need for more thoroughly presenting the aims and needs of this association to the profession at large through the different state journals and recommended that this matter be urged and an active campaign be carried forward in this department. The question for consideration then was whether the association should next year have general sessions as had been arranged for this year and the recommendation was then made that there be only two general sessions at the next annual meeting with the remaining session divided up into sections for scientific work.

After accepting the above report and authorizing the Secretary to present the same at the general session Wednesday morning, the Committee adjourned to meet Wednesday after the election of the new officers, at 12:00 o'clock M.

Casino Hall, October 21st, 9:00 A. M. Meeting of the Association called to order by President Holland. Dr. Geo. M. Gray of Kansas City, Kan., then presented the following resolution, which, upon motion, duly seconded and carried, was unanimously adopted:

"Resolved, That the Medical Association of the Southwest approves the efforts of the graduate trained nurse to raise the standard of education and obtain proper recognition through registration."

(Signed) GEO. M. GRAY.

The report of the executive committee, as outlined elsewhere, was presented, which, upon motion duly seconded and carried, was adopted and ordered spread on the minutes.

The following resolutions were then presented by Dr. E. H. Martin of Hot Springs, Arkansas:

WHEREAS, the tendency of physicians and charitable organizations over the country is even now to send advanced, indigent consumptives from their homes to climatic resorts, notably parts of Texas, Colorado and the Southwest; and,

WHEREAS, the consensus of opinion among the best authorities is that climate alone cannot cure tuberculosis; and,

WHEREAS, boarding houses and hotels in many resorts no longer open their doors to this class of people, thereby depriving them of any chance of securing proper accommodations; and,

WHEREAS, the sanitariums and eleemosynary institutions of the Southwest are already overburdened with such cases and the people are called upon to double duty in that they must take care of others beside their own consumptives;

THEREFORE, Be it Resolved, that all states and territories throughout the country, and all physicians and charitable organizations be urged to discourage the aimless drifting of the average consumptive and that all advanced consumptives be kept within the confines of their own city, county or state, and that the legislatures of the several states be urged to pass such laws as will insure the building and maintenance of sanitariums for curable cases and hospitals for advanced and incurable cases.

(Signed) E. H. MARTIN.

On motion seconded and duly carried the above resolutions were unanimously adopted. The Secretary was also authorized to notify the Secretary of each State Association of this action.

The report of the Nominating Committee was then presented, placing in nomination for the office of president for the coming year, Drs. Jabez N. Jackson of Kansas City, Missouri, and S. S. Glasscock, of Kansas City, Kansas. Upon motion of Dr. Glasscock duly seconded and carried the rules were suspended and the Secretary was instructed to cast the unanimous vote of the Association for Dr. Jackson for president

for the ensuing year. The Secretary then announced that he had cast 243 votes for Dr. Jackson for President and the President declared Dr. Jackson duly elected.

The Committee then nominated for vice presidents for the ensuing years, Drs. D. L. Perry, Parsons, Kansas; M. A. Kelso, Enid, Oklahoma; Joe Becton, Greenville, Texas, and St. Cloud Cooper of Fort Smith, Arkansas. Upon motion the rules were suspended and, as before, the Secretary instructed to cast the unanimous ballot for each of the above. The Secretary then announced the ballot and the president declared each elected.

The Nominating Committee then presented the name of Dr. F. H. Clark of El Reno, Oklahoma, for Secretary-Treasurer for the coming year and upon motion the Secretary of the Nominating Committee was instructed to cast the unanimous vote of the association for Dr. Clark for Secretary-Treasurer, and the President declared him elected.

Dr. Bacon Saunders then moved that a rising vote of thanks be tendered the Secretary for his services in behalf of the Association during the past year, which was unanimously carried. After, the Secretary in a few words thanked the Association for the honor they had conferred and pledged his best efforts in the year to come.

The President then appointed a committee of two to wait upon the president-elect and inform him of his election and escort him to the platform, Drs. Bacon Saunders and C. W. Fassett. Dr. Bacon Saunders presented the following resolutions, which were unanimously adopted by a rising vote:

> In view of the unbounded hospitality and the ample facilities afforded this Association at this meeting for the comfort, pleasure and delectation of its members, Therefore,
>
> Be It Resolved, that the thanks and sincere appreciation of the Medical Association of the Southwest, be expressed by a rising vote to the profession of Kansas City, to its Committee of Arrangements, and to all those who have in any way contributed to the royal greeting and lavish hospitality extended to us during this meeting;
>
> And especially do words fail us when we attempt to voice the gratitude of our hearts for the very great courtesy shown in providing such unfailing means for the pleasure and happiness of the visiting ladies. They must be a gentle and hospitable people indeed who care so well for the strangers within their gates.
>
> Here's to the City by the Kaw—may her longevity and prosperity be as boundless as her hospitality.
>
> (Signed) Bacon Saunders.

The President elect, Dr. Jabez N. Jackson, was then installed into office and addressed the Association, setting forth briefly the aims and ambitions for the coming year and asking for the same loyal support that had been accorded his predecessor.

The following members of the Executive Committee were then elected to serve for three years: Dr. B. J. Vance, Checotah, Oklahoma; Dr. J. D. Riddell, Enterprise, Kansas; Dr. E. H. Martin, Hot Springs, Arkansas; Dr. C. W. Fassett, St. Joseph, Missouri; Dr. D. Strickland, Cleburne, Texas.

The Nominating Committee then presented San Antonio, Texas, as the next place of meeting which was upon motion duly selected and the meeting adjourned to finish the scientific session.

F. H. Clark, M. D.,
Secretary-Treasurer.

Section officers for the ensuing year:

Section Surgery: Chairman, Dr. J. A. Foltz, Fort Smith, Arkansas. Vice Chairman, Dr. R. H. Barnes, St. Louis, Missouri. Secretary, Dr. E. H. Martin, Hot Springs, Arkansas.

Section on General Medicine: Chairman, Dr. A. K. West, Oklahoma City, Oklahoma. Vice Chairman, Dr. G. H. Moody, San Antonio, Texas. Secretary, Dr. Louis M. Warfield, St. Louis, Missouri.

Section on Eye, Ear, Nose and Throat: Chairman, Dr. F. D. Boyd, Fort Worth, Texas. Vice Chairman, Dr. J. F. Gsell, Wichita, Kansas. Secretary, Dr. A. W. McAlester, Kansas City, Missouri.

COUNTY SOCIETY NOTES

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The Cape Girardeau County Medical Society held its regular monthly meeting Friday, November 6th, at Cape Girardeau. Ten members were present. After transacting the usual business, the program followed.

Report of surgical cases in practice: Dr. J. D. Porterfield, Jr., reported several cases of ovarian cyst. Dr. G. B. Schulz reported three cases, one of psoas abscess with recovery; second, implantation cyst, following trauma; third, a case of necrosis of the tibia, resulting in amputation.

Report of nose and throat cases: Dr. H. L. Cunningham drew attention to the importance of recognizing adenoids and their treatment, and reported a case of nasal polypus.

Report of eye cases: Dr. W. E. Yount reported a case of injury to the eyes by lye caused by one child pouring the contents of a can of lye into the eyes of a 5 months' old child. He also spoke of the transmission of eye affections from one person to another due to carelessness. All reports brought out good discussion.

This is the second time in the history of the society that the full program as prepared by the committee was rendered. The members in general have not taken the interest in society work that they should. —E. H. G. Wilson, M. D., Secretary.

CLINTON COUNTY MEDICAL SOCIETY.

The Clinton County Medical Society met in Perrin, November 10, 1908. The following members were present: Drs. J. T. Kimsey, A. W. Robertson, C. M. McConkey, R. W. Rea, J. O. K. Gant, Frank Fulton, Jno. Sturgis, John Kay, and P. M. Steckman. In the absence of the president, Vice-president Rea called the meeting to order.

Three excellent papers were read and thoroughly discussed, as follows: "The Progress of Medical Science," by Dr. John Sturgis; "Preventive Medicine," by Dr. R. W. Rea; "Does the Profession Use Tonics as in Other Days," by Dr. J. T. Kimsey.

Resolutions, urging our representative in legislature to use his best influence for securing the passage of the amendment to the law governing criminal abortion, as recommended by the Committee on Public Policy and Legislation of the Missouri State Medical Association, were adopted.

The next meeting is to be a business meeting and will be held in Plattsburg in December.—P. M. Steckman, M. D., Secretary.

COOPER COUNTY MEDICAL SOCIETY.

The Cooper County Medical Society, upon the invitation of Dr. H. V. Cordry, Resident Physician, met at the State Training School for Boys in Boonville, Mo., on Tuesday, November 10th.

Members present: Drs. H. V. Cordry, R. L. Evans, R. L. Fogle, J. S. Parrish, F. R. Smiley, A. E. Monroe, J. R. Lionberger. Dr. H. H. Smiley, of Texarkana, was present as a guest of the Society.

After an elegant dinner in the officers' dining room, at which Dr. and Mrs. Cordry presided, the Society met in regular session at the Hospital of the Training School. Dr. Cordry presented a case of leg ulcer which had resulted from an injection of sulphate of quinine in a patient suffering from a severe attack of malaria. The ulcer was all that remained of a deep abscess of the thigh; the abscess developed last July at the time of the injection of the quinine. Dr. Evans presented a mucous cyst which had precipitated labor in a multipara at the third month; the cyst was found presenting at the os of the uterus after the fetus had been expelled and it is presumed that the cyst had hastened the expulsion of the product of conception.

After the presentation and discussion of the above and other cases, the Secretary read a letter from Dr. J. N. McCormack, of Kentucky, Chairman of the Committee of Organization of the A. M. A. Dr. McCormack asked the support of the Society in securing a National Department of Public Health, and requested that the Society act through its Congressman. After the reading of the letter the Society adopted the following resolution:

> "In view of the efforts being put forth by the Committee of One Hundred, as outlined by Dr. McCormack, for the purpose of bringing about the establishment of a National Health Bureau, Be it Resolved, That We, the members of the Cooper County Medical Society, do heartily endorse such effort, and that we pledge this Society to cooperation along that line so far as may be in our power through our national representative in Congress.
>
> J. S. Parrish,
> A. E. Monroe,
> F. R. Smiley,
> Committee.

The President instructed the Secretary to communicate with the Congressman of this district and to ask his support in the above measure.

As the local expenses of the Society are nominal, the Society voted to reduce the local dues to fifty cents per annum.

A vote of thanks was extended to Dr. and Mrs. Cordry and to the Superintendent of the Training School, Major Clark, for the hospitality extended to the Society.

It was decided to take up the diseases of the respiratory tract at the next meeting of the Society, and at subsequent meetings to discuss diseases prevalent at the time and season.

The Society then adjourned to meet December 1st, 1908.—Jno. R. Lionberger, M. D., Secretary.

HALL COUNTY MEDICAL SOCIETY.

The Hall County Medical Society met at Maitland, November 5th. Owing to the inconvenience of reaching Maitland by railroad from some parts of the county the attendance was not so large as usual.

Dr. Proud read a paper on "Tetanus," reporting four cases with the history of each case. Questions pertaining to the welfare of the pro-

fession were taken up and much time was given to the discussion thereof. The next meeting will take place at Forest City, January 7.—J. F. CHANDLER, M. D., Secretary.

LIVINGSTON COUNTY MEDICAL SOCIETY.

The Livingston County Medical Society met in regular session at Chillicothe, November 11th.

Dr. Thos. E. Graham, of Chula, recently of St. Louis, was admitted to membership by transfer card from the St. Louis Medical Society. Dr. Graham has for four years been connected with the St. Louis City Hospital and City Dispensaries, and has just recently located in this county, and we welcome him in our Society. We bespeak for him success in his chosen field and hope he will prove a valuable addition to the profession in this community.

Dr. G. W. Carpenter, of Utica, also became a member of the Society and was given a hearty welcome.

Dr. Graham read a very interesting paper on the use of antitoxin in city dispensaries, and methods used in preventing the spread of contagious diseases in cities. The paper was freely discussed by those present.

Dr. W. R. Simpson gave the history of three cases of ulcer of the stomach occurring recently in his practice, death resulting in a few hours.

Under the head of miscellaneous business the Society put itself on record as favoring the advance medical legislation advocated by the State Board, and each member pledged himself to urge his senator and representative to favor such legislation as might be offered by the legislative committee.

The Society adjourned to meet in January, when officers will be elected for the coming year.—J. C. SHELTON, M. D., Secretary.

MADISON COUNTY MEDICAL SOCIETY.

The Madison County Medical Association held a very interesting session Tuesday evening, November 15th. The following members were present: Drs. O. Haley, C. A. Anthony, S. C. Slaughter, J. H. Greenwood, Wm. Nifong, Chas. U. Davis and Jno. K. Smith.

The program consisted of a paper entitled, "Ergot, Its Uses and Abuses," by Dr. Wm. Nifong. The Society commended Dr. Nifong for his care in getting up this paper. It was discussed freely by the members and all received benefit therefrom.

A reported case of penetrating gun-shot wound of the skull, by Dr. Greenwood, caused a free discussion on the question whether or not to probe a cavity. (What is the feeling of the editor, yes or no?)

The Society adjourned to meet the first Tuesday in January.—JNO. K. SMITH, M. D., Secretary.

Note: Generally in penetrating wounds of the skull due to bullets the injury inflicted when the blow is received is the main consideration, and the missile becomes of more or less secondary importance. Operation if done shortly after the injury is not primarily to remove the bullet, but to relieve conditions in the cranium, resulting from the injury, such as hemor-

rhage, with or without increased intracranial pressure, depressed fractures, etc. If the bullet can be seen during these manipulations, remove it, otherwise it is better to determine its exact location later by the X-ray, and then if it is in a "silent" area it is best left. It is best not to further injure a lacerated brain by probing. M. B. C.

PETTIS COUNTY SOCIETY.

Pettis County Medical Society met in regular session on November 9th. There was a good attendance of the members.

Dr. M. C. Alderman read an interesting paper on "Surgical Diagnosis." Dr. Ferguson opened the discussion and was followed by a number of the other members.

RAY COUNTY MEDICAL SOCIETY.

The Ray County Medical Society held its regular bi-monthly meeting at Richmond, Wednesday, November 18th. After partaking of an excellent dinner at the Hotel Richmond, the members and visiting physicians repaired to the hotel parlors for the transaction of business and rendition of the program. Roll call showed the following members present: Drs. Greene, Hamilton, Ball, Shotwell, Smith, Higdon and McGaugh, of Richmond; Drs. Cook and Rentfro, of Rayville; Dr. Ellis, of Orrick; Dr. Etherton, of Camden; Dr. Joiner, of Knoxville; and Dr. Major, of Hardin. Visitors: Drs. Jabez N. Jackson and Flavel B. Tiffany, of Kansas City; Dr. R. F. Cook, Carrollton, and Dr. E. H. Musson, of Norborne.

Letters were read by the secretary from Dr. J. A. B. Adcock, secretary of the State Board of Health, and from the publicity department of the American Medical Association, urging coöperation along the line of medical legislation and the suppression of quackery, which were referred to Dr. T. B. Cook, our representative in the State legislature.

Officers for the ensuing year were elected as follows: President, Elmer T. McGaugh; vice-president, Robert Sevier; secretary, Hermon S. Major; treasurer, E. F. Higdon; censors, Jas. E. Ball, Geo. W. Joiner and Emmett W. Rentfro, for the period of one, two and three years respectively. Hermon S. Major was elected delegate to the State Association for the term of two years, with Jas. W. Smith as alternate.

Dr. Jabez N. Jackson gave a very classical and practical address on "Surgical Technic." He spoke of the great progress that had been made and is still being made in the science of surgery and gave statistics showing the increased percentage of cures in cases which were once considered incurable. Dr. Jackson closed his address by making an eloquent appeal to the country practitioner to insist on the removal of all suspicious tumors and growths while they were localized, instead of letting them go until the trouble became general. Dr. R. F. Cook opened the discussion on Dr. Jackson's address. He agreed fully with everything that had been said and urged the physicians present to apply it in their practice.

Dr. Flavel B. Tiffany was called upon and responded in a few well-chosen remarks on diseases of the eye, more especially cataracts. Dr. E. H. Musson made a few remarks in the discussion of both Dr. Jackson's and Dr. Tiffany's addresses and was followed by Dr. C. B. Shotwell.

This was perhaps one of the best meetings that has been held in the history of the society and all present felt that it was good to be there. The next meeting will be held at Richmond, on the third Wednesday in January.—HERMON S. MAJOR, M. D., Secretary.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

Regular meeting, Wednesday evening, November 11th, the president, Dr. H. S. Forgrave, in the chair.

Dr. W. E. McKinley was admitted to membership in the Society on a transfer card from Worth county.

Dr. Elam presented for consideration a copy of a bill, providing for the registration and examination of trained nurses in the State. Upon motion, this proposed bill received the unanimous endorsement of the Society.

The Symposium on Tuberculosis was then taken up, and interesting papers were read as follows:

Pathology and Bacteriology, Dr. L. J. Dandurant.

Clinical Study and Therapy, Dr. A. E. Holly.

Bovine vs. Human Tuberculosis; Governmental Duty, Dr. E. H. Bullock.

State and Municipal Control; Hygienic and Economic Aspects, Dr. E. S. Ballard.

Among those taking part in the discussion were Drs. T. H. Doyle, Levi Long, Jacob Geiger O. G. Gleaves, P. I. Leonard, A. L. Gray, C. A. Good, W. T. Elam, Stamey, Murphy, Prof. Whiteford, Superintendent Public Schools, Mr. D. W. Morrison and Mr. W. B. Kelling, member and Secretary respectively of the Board of Health.

Drs. Dandurant, Holley, Ballard, and Bullock, who represented the County, City, Board of Health, and the Society, respectively, made brief reports of the Congress on Tuberculosis which they attended in Washington.

Upon the suggestion of Prof. Whiteford, it was ordered that a conference be arranged between representatives of the Society and the Board of Education, with a view to giving addresses in the Public Schools on matters of health and prevention of disease.—CHAS. WOOD FASSETT, M. D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY.

The Schuyler County Medical Society met at Lancaster, on November 11th. Dr. J. B. Bridges, vice-president, presided, the president, Dr. E. L. Mitchell, being absent. Members present: Drs. Zeber, Keller, W. F. Mitchell, J. B. Bridges and H. E. Gerwig.

A number of interesting cases were reported and discussed by all present.

The Society voted to change our regular time of meeting from semi-annually to quarterly.

Drs. W. F. Mitchell, W. H. Zeber and J. H. Keller were appointed to read papers at the next meeting. The next meeting will be held on January 12, 1909.—H. E. GERWIG, M. D., Secretary.

ARTICLES APPROVED BY THE COUNCIL ON PHARMACY AND CHEMISTRY.

PYRAMIDON NEUTRAL CAMPHORATE.

This compound, $(C_{13}H_{12}N_3O)_2.C_{10}H_{16}O_4$, is a neutral salt of pyramidon and camphoric acid.

Actions and Uses.—See pyramidon acid camphorate. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

PYRAMIDON SALICYLATE.

Pyramidon salicylate, $C_{13}H_{17}N_3O.C_7H_6O_3$, is an acid salt of pyramidon and salicylic acid.

Actions and Uses.—It is antipyretic, analgesic and antiseptic, combining the activity of its components. It is recommended in rheumatic and gouty affections, neuralgia, pleuritis, etc. Dosage.—0.5 to 0.75 Gm. (8 to 12 grains) in powder or aqueous solution. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

QUARTONOL.

A name applied to a mixture of tonols in tablets of 0.3 Gm. (5 grains), each tablet being said to contain lime tonol, 0.148 Gm. (2¼ grains), sodium tonol, 0.148 Gm. (2¼ grains), quinine tonol, 0.03 Gm. (½ grain), and strychnine tonol, 0.00033 Gm. (1-200 grain).

Actions, Uses and Dosage.—See Glycerophosphates. Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York).

PYRAMIDON.

Pyramidon, $C_6H_5N\begin{matrix} /CO\text{———}C.N(CH_3)_2 \\ \qquad\qquad\quad \| \\ \backslash N(CH_3).C(CH_3) \end{matrix} = C_{13}H_{17}N_3O$,

is phenyl-dimethyl-dimethylamido-pyrazolon, a substitution product of antipyrine, $C_{11}H_{12}N.O$, into the molecule of which a dimethylamino group, $N(CH_3)_2$, has been introduced.

Actions and Uses.—Pyramidon acts as an antipyretic and anodyne, like antipyrine, but is effective in much smaller doses. The action, while somewhat slower at the beginning, is more lasting. It is claimed to be devoid of harmful influence on the blood, heart or kidneys; to the contrary, it is said to stimulate the heart's action. It has been recommended particularly in the chronic fevers of tuberculosis, as well as in the acute febrile conditions incident to typhoid fever, erysipelas and pneumonia. Dosage.—0.3 to 0.4 Gm. (5 to 6 grains), most conveniently in the form of tablets, a single dose usually sufficing for 24 hours. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

PYRAMIDON ACID CAMPHORATE.

This is an acid salt of pyramidon and camphoric acid, $C_{13}H_{17}N_3O.C_{10}H_{16}O_4$.

Actions and Uses.—The acid and neutral salts combine the antipyretic action of pyramidon with the antihydrotic action of camphoric acid. It is claimed that in these compounds the respective action of the component is modified, the antihydrotic effect of the camphoric acid being materially increased while the toxicity of the pyramidon is diminished. In the neutral salt, the antipyretic action of the pyramidon predominates; in the acid salt the antihydrotic effect of the camphoric acid. They are particularly recommended in the febrile conditions of phthisis, attended by profuse sweating. Dosage.—Neutral camphorate, 0.5 to 0.75 Gm. (8 to 12 grains); acid camphorate, 0.75 to 1 Gm. (12 to 15 grains), given in powders or aqueous solution. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

(To be continued.)

BOOK REVIEWS

E. B. Treat & Co., medical publishers, New York, announce, in press, for early publication, the following works:

SURGICAL DISEASES OF CHILDREN. A modern treatise on Pediatric surgery, by Samuel W. Kelley, M. D., Professor of Diseases of Children, Cleveland College of Physicians and Surgeons. This volume occupies a distinct place in medical literature as it is devoted *entirely* to the surgical diseases of children and is the first yet written by an American on the subject.

PTOMAINE POISONING. A Concise Exposition of the Etiology, Bacteriology, Pathology, Symptomatology, Prophylaxis, and Treatment of Bacterial Food Poisoning by Prof. Dr. A. Dieudonne, Munich, translated and edited, with additions, by Dr. Charles Frederick Bolduan, Bacteriologist, Research Laboratory, Department of Health, City of New York. 8vo, 125 pages, cloth, prepaid, $1.00 net.

DIAGNOSIS AND TREATMENT OF DISORDERS OF THE BLADDER, with Technique of Cystoscopy. By Follen Cabot, M. D., Professor Genito-Urinary Diseases, Post-Graduate Medical School and Hospital, New York. A manual of this phase of surgery supplementing the more pretentious volumes. 8vo, 225 pages, 40 illustrations and 1 colored plate, cloth, prepaid, $2.00 net.

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JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

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ORIGINAL ARTICLES

LUPUS ERYTHEMATOSUS.*

BY J. PHILLIP KANOKY, M. D., KANSAS CITY, MO.

Lupus erythematosus, the ulerythema centrifugum of Unna, is a chronic inflammation of the skin, characterized by scaly patches, usually rounded or oval in outline and reddish in color, which are generally followed by scars. These patches may be discrete or confluent, and the face, especially the nasal bridge and upper cheeks, is the region most frequently involved.

The clinical resemblance to lupus vulgaris is often confusing and it was probably for this reason that Cazenave, in 1850, christened the disease "lupus erythematosus." In America it forms about .3 per cent. of all skin affections, occurring with about the same frequency as true lupus. There are two varieties, the local, or circumscribed, and the general, or disseminated. In the former the disease begins as a small, slightly elevated, flat-topped papule, the bright red color of which does not completely disappear on pressure. This lesion gradually enlarges peripherally until an infiltrated, scaly patch, varying from one to several cms. in diameter results, the slightly depressed center of which is studded with the openings of dilated follicles. The scales are of a light yellow or dirty gray color and can be removed by slight friction. The surface of the affected area is always dry, pinkish or reddish in color, and never ulcerates.

At times, after the disease has continued for several months or years, a tendency to spontaneous involution is manifested. In these cases a soft,

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

flexible, permanent atrophic scar is left, the surface of which is marked by the patulous mouths of enlarged sebaceous ducts.

A frequent clinical picture is the so-called "butterfly" or "bat's wing" marking. In this type the patches on the upper cheeks have become confluent, a narrow band extending over the bridge of the nose.

The scalp is quite often attacked, permanent loss of hair over the affected area resulting. In this location the scaliness is les smarked and the borders more elevated than on other parts of the body.

The disseminated variety is seldom seen. The inflammation is more acute in character and is accompanied by constitutional symptoms similar in character to those seen in erythema multiforme. The lesions may be vesicular or bullous at times. The prognosis is serious, about fifty per cent. of the patients dying.

The cause of lupus erythematosus is not known. It occurs most frequently in early adult or middle life. Several among our foremost authorities believe it to be a form of tuberculosis of the skin while others, equally prominent, maintain that the two are separate and non-related diseases. Some recent opsonic statistics would seem to indicate that the latter are in the right.

From a histo-pathologic standpoint the disease process differs very materially from lupus vulgaris and tubercle bacilli have never been found in the lesions. The affection is to be differentiated from acne rosacea, chronic eczema, the syphilides and true lupus. In acne rosacea the surface is smooth and glistening, dilated capillaries are a prominent feature, the outline is irregular and ill defined, and the tip of the nose generally shows the greatest degree of involvement. Chronic eczema is seldom if ever dry at all times, itching is more or less intense, the mouths of the sebaceous ducts are not patulous and do not contain the greasy plugs seen in L. erythematosus, and there is no formation of cicatrices. In the non-ulcerating syphilide the nodular tubercles, together with the small, depressed, oval, or circular, pigmented scars, the duration, the rapidity of evolution and the absence of dilated follicles, will serve for differentiation, lupus vulgaris frequently proves confusing. Here the presence of the "apple jelly" nodules, best seen when the areas are examined through a closely applied diascope, the rough, fibrous scars, and the extensive ulceration and tissue destruction are sufficient for recognition. In case of doubt the tuberculin reaction or a biopsy will serve to make clear the diagnosis. The treatment varies with each particular case. A host of remedies have been recommended, none of which is specific and many seemingly useless. The milder methods and preparations should always receive the first trial. If there is considerable irritation and hyperæmia a soothing application, such as zinc oil (zinc oxide 60.0, olive oil 40.0) or calamine lotion should be employed for several days, meanwhile administering salicin (commencing with 1.0 after each meal and gradually increasing) internally. If the lesions are in the non-inflammatory stage, pale and anemic, I at once paint them with a strong iodine preparation

(Churchill's tincture), repeating it three times each week and administering the salicin internally. Here the latter may be alternated with quinine or the cinchona salt substituted altogether.

Where the induration is marked and the condition notably sluggish, agents possessing marked stimulating power are indicated. I prefer salicylic or pyrogallic acid, suspended in collodion or traumaticin.

℞ Acid. salicylic 40.0
Acid. pyrogallic 10.0
Collodium 100.0

M. et sig. Shake and apply at night with a camel's hair brush.

If this causes too much irritation it should be temporarily discontinued and one of the soothing preparations substituted.

It is well to look to the general health of the patient. Alcohol, tobacco, tea and coffee are to be avoided, and foods which have a tendency to increase cutaneous hyperæmia should not be eaten. The parts should be kept clean and, unlike the inflamed areas in eczema, the local use of soap and water is not contraindicated.

As regards measures other than hygienic and medicinal, the Röntgen ray is not nearly so valuable here as in true lupus and the arc lamp of Finsen has, in my experience, likewise proved disappointing.

The liquid air treatment recommended by Fox, Dade and others would seem an excellent procedure, and the use of carbon dioxid snow, recently suggested by Pusey, even a better and more practicable course. The latter is certainly deserving of a thorough trial.

Case Reports. During the past eighteen months I have treated five cases of the localized type and seen one case in which the disease was disseminated over the face, trunk and left arm. Nos. 1 and 2, both railroad men in the employ of the Missouri-Pacific Railroad Company, have done extremely well under the iodine-quinine line of treatment. In No. 1 the disease was of 5 years' duration, No. 2 indefinite but had been present for several years. Both were of the typical butterfly type and presented slight scarring. Each case had repeatedly been diagnosed and treated as a chronic eczema. At the present time there are no evidences of the disease other than the cicatrices.

In No. 3, a married woman of 42, living in Great Bend, Kans., the lesions, which involved the face, forehead and scalp, had appeared over twelve years prior to my seeing her. This case proved extremely rebellious to treatment. The patches reacted but slightly, even to the application of Churchill's tincture, so the salicylic-pyrogallic preparation in collodion was substituted. Later, the x ray was employed as an adjuvant measure, twelve minute exposures, with a soft tube, at a distance of 15 centimeters, being given. Internally, salicin was alternated with quinine. Under this regimé improvement finally set in and a temporary cure ultimately resulted. Recently she wrote me that a new spot had

appeared. I shall try the carbon dioxid snow in this case, although decided benefit resulted from the use of the ray.

No. 4 was a married woman, 32, living in Kansas City. The disease was of three years' duration and involved both upper cheeks, with an oval patch, about 8x10 cms., just below the left temple.

In this case the stronger tincture of iodine and the x ray locally, with quinine internally, gave most excellent results. Only a few exposures were given, so the iodine-quinine combination deserves the credit for the splendid and lasting effect secured.

No. 5 was a married woman, aged 40, living in Martin City, Mo., and the condition had been present for two and a half years.

There was a large oval patch (measuring 8x10 cms.) over the right eye, an irregular lesion extending across the lower part of the nose, an area about the size of a dime in the interpalpebral space, and slight bilateral involvement of the surfaces lying just above both nasolabial folds.

The lesions responded promptly to the iodine applications, although soothing lotions had to be substituted a few times when the inflammation became too intense. Internally, quinine sulphate was alternated with salicin, weekly. In the course of four months the patches were practically obliterated and when I last saw the patient, in February, there remained only a slight involvement of the patch over the eye.

No. 6. This was the case in which the disease was of the diffused or disseminated type. I first saw the patient, a woman, aged 34, in consultation, last December and I have examined her only once or twice since then. The disease commenced on the cheeks, later the left upper arm became involved and this was followed, a few weeks afterward, by a lesion on the right side of the trunk. The mucous membranes were not affected and the constitutional symptoms were less severe than is usual in this type of the disease. She has been receiving only internal treatment, quinine, with phosphorus and other tonics, and appears to be doing well.

Conclusions. The iodine-quinine, or iodine-salicin, method of treatment, while not infallible, gives excellent results in a considerable percentage of cases of lupus erythematosus, especially if employed early in the disease. In those cases where the pathologic conditions has been present for many years these agents will oftentimes have to be supplemented by more vigorous measures. Of these, the salicylic-pyrogallic-collodion preparations are cleanly, efficient, cheap and easily obtained.

The x ray, while not so valuable here as in true lupus, is undoubtedly of assistance at times.

912 Walnut Street.

THE DANGER OF PERMITTING WARTS AND MOLES TO GROW LEST THEY BECOME MALIGNANT; WITH REPORT OF TWENTY-FIVE ILLUSTRATIVE CASES FROM THE ST. LOUIS SKIN AND CANCER HOSPITAL.*

BY EDMUND A. BABLER, M. D., ST. LOUIS.

My principal object in bringing this subject to your attention at this time is to present these photographs with the hope that they will readily convince the most skeptical that it is no longer permissible to regard warts and moles as harmless; and to urge excision before malignant changes manifest themselves.

I must confess that the subject did not impress me until a series of distressing cases in point came under my observation at the St. Louis Skin and Cancer Hospital. Very few practitioners are appreciative of the frequency with which warts and moles become malignant growths, eventually destroying the life of the unfortunate sufferer.

The cases studied by me fully corroborate the contention of Keen that "the moment warts and moles begin to increase in size they are almost invariably malignant growths and should be treated as such." In all instances in which the wart or mole is exposed or subject to more or less frequent irritation, especially when situated upon the face or neck, it should be promptly excised—*not cauterized as is often the practice.* I am satisfied that in some of the cases in which a wart was said to have undergone degeneration, the supposed *wart was in reality the early clinical manifestation of a rodent ulcer.*

The medical attendant is by no means always responsible for the delay in having these blemishes excised. The patient will oftentimes flatly refuse to have anything done. This is one of the distressing obstacles with which we occasionally meet in early cases of malignant disease at the St. Louis Skin and Cancer Hospital. The to be pitied unfortunate fellow will say: "I want to get well without the knife." The next time he comes to the hospital the disease has progressed beyond the realm of successful surgery. *Experience has clearly demonstrated that the secret of success in the treatment of malignant disease is early, thorough, complete excision. There is no such thing as recurrence.* When we hear of so-called "recurrences" we know that the disease *was not all removed at the primary operation.*

*Read by title in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

In a recent issue of the Journal of the American Medical Association[1] I reported eighteen cases in which a wart or mole became a malignant growth. At this time I want to briefly review these cases and to add seven others that have been admitted to the Department of Surgery of the St. Louis Skin and Cancer Hospital since January 1st, 1908.

Case 1. History. Mr. W. E. W., aged 63, was admitted November 19, 1907. Fifteen years ago he noticed a small seed-wart growing on the back of his left hand, but, since it did not cause him any discomfort or did not grow, he gave it only passing consideration for nine or ten years, when seven or eight small, brownish, warty-like growths appeared on the back of his right hand and a scaley roughened area on the right side of his nose. At this time the wart on the left hand began to grow quite rapidly and he trimmed it frequently. Three years ago the growth on his left hand was the size of a walnut and divided into two equal portions; he was advised to have it removed, but refused. Six months ago it became painful and discharged an offensive, yellowish green fluid. Arsenic was applied and reduced the size of the growth very much, but within a very few weeks the growth had attained its former size. Arsenic was again applied with a similar result. Recently the growth on his left hand has been growing very rapidly and a hard, flat, ulcerated growth has appeared on his left cheek. His left arm is practically useless; he cannot flex or extend it very freely.

Examination.—On the dorsal surface of the left hand was a large, cauliflower-like growth covered with a yellowish, greenish, offensive discharge; the lower third of the forearm was swollen; the flexor muscles were markedly contracted, limiting very materially the movements of the forearm; epitrochlear gland not enlarged. On the dorsal surface of the right hand were eight, brownish, firm nodules (Fig. 1). On the left malar eminence was a firm, flattened mass, about one inch in length and one-half inch in width, presenting the appearance of an epithelioma (Fig. 1). On the right side of the nose was a scaly-like indurated area as large as a silver dime.

Operation.—The left forearm was removed by disarticulation at the elbow. The rubber tissue drain was removed on the third day. Union was complete on the fourteenth day. The growth on the left malar eminence was also excised. Union was primary, but about three weeks later a small nodule was noted in the upper, outer margin of the line of incision. X-ray exposures have been given each week since the latter finding.

Pathologic Diagnosis.—Epithelioma of hand and cheek.

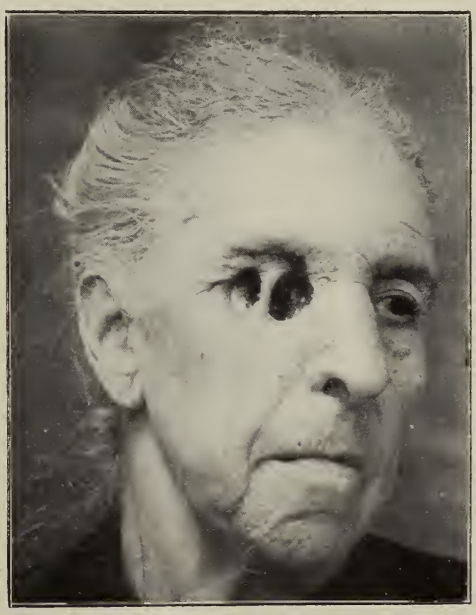
Case 2. History.—Mr. J. K., aged 72, was admitted December 17, 1907. Ever since he can remember he has had a mole on the left side of face near the external canthus of eye; six years ago the barber accidentallly cut it, but it healed within a short time. A few months thereafter a small scab appeared on the mole and he picked it off with his

[1] J. A. M. A. 1908—50—1236.

Case I.—Epitheliomatous degeneration of wart on hand.

Case II.—Malignant degeneration of a pigmented mole.

Case III.—Malignant degeneration of mole on temple.



Case IV.—Malignant degeneration of wart on eyelid.

finger nail; another scab appeared and was removed; after which time the mole became an ulcerating growth; all attempts to heal it were futile. He consulted many prominent surgeons, but was refused an operation. Pastes, salves, powders, x-ray, and other applications were not of any benefit; the disease continued unabated. During the past six months the destructive process made very rapid progress; patient lost seventy pounds and the pain became of an agonizing character. Morphin, in very large doses, is necessary to secure relief.

Examination.—The left eye and greater portion of left side of face had been destroyed.

Treatment.—Palliative.

Pathologic Diagnosis.—Rodent ulcer.

Case 3. History.—Mrs. J. E., aged 54, was admitted January 22, 1906. When thirty years old she noticed a small mole growing on her left temple near the hair margin. She frequently irritated the mole while combing her hair; sometimes the comb scratched off the top so that the mole would bleed. About four years ago the mole began to grow and develop into a malignant ulcer. The destructive process extended gradually to the left ear, which latter it eventually destroyed. A portion of the scalp and left temporal muscles have been destroyed. At present she cannot hear very well with left ear; pain is quite severe. At times the pain extends to the orbit and to the parietal region. There is a constant ringing noise in left ear.

Examination.—A large, granular, ulcerated area about four inches in diameter, the center of which was the middle ear, occupied the left temporal region; the left external ear was destroyed (Fig. 2), also the entire petrous portion of the temporal bone; the dura was in view.

Operation.—Parts curetted and cauterized. Temporary benefit; involvement of brain; death.

Pathologic Diagnosis.—Carcinoma (rodent ulcer).

Case 4. History.—Mrs. S. O'M., aged 74, was admitted February 25, 1905. At 50 years of age she noticed a small wart on her right lower eyelid. Five years ago the wart began to grow and soon became red and ulcerated and in two years the destructive process involved the entire right half of the lower lid and attacked the eye. One year later she had the lid and eye removed, but within a short time the condition was as bad as before operation. Pain has become a very prominent and distressing symptom. Pastes, salves and powders have been applied without benefit.

Examination.—The right orbital cavity was occupied by a cauliflower-like growth from which exuded an offensive, purulent discharge. Patient was emaciated, pale and weak.

Operation.—The orbital cavity was thoroughly cleaned out. Within a very short time evidences of recurrence were noted (Fig. 3). The disease extended to the brain; patient died a short time ago.

Pathologic Diagnosis.—Epithelioma of orbit and brain.

Case 5. History.—Mr. P. G., aged 70, was admitted August 25, 1905. Six years ago he noticed a small wart-like nodule on the left side of his nose. Six months ago it began to grow, extending to cheek. It became lobulated and resembled a bunch of grapes. At present it is growing at a rapid rate.

Examination.—On left side of nose and cheek was a red, lobulated growth about as large as half of a walnut, presenting the appearance of an epithelioma.

Operation.—Growth was excised. Union was primary. Patient has not been seen since May, 1906. No recurrence at that time.

Pathologic Diagnosis.—Epithelioma of nose and cheek.

Case 6. History.—Mr. J. L. T., aged 73, was admitted July 11, 1906. He had a small mole on the left side of his nose ever since he can remember. In 1889 a barber accidentally cut off the top of the mole; the wound healed, but about a year ago a scab appeared and he picked it off. Within a short time another scab appeared and he removed it; this process was repeated at frequent intervals until nine months ago, when the mole became a destructive ulcer which has grown rapidly during the past two months.

Examination.—On the left side of the neck near the angle of the jaw was an indurated ulcer, one and one-half inches in length and one-half of an inch in width, presenting the usual appearace of a rodent ulcer. No palpable glandular involvement. Growth was excised. Primary union.

Microscopic examination showed rodent ulcer.

Case 7. History.—Mr. J. P. C., aged 56, was admitted June 26, 1906. For many years he has had a small mole on the right side of his face, but it did not cause him any inconvenience until in 1889, at which time a barber cut it while shaving him. The wound healed within a short time, but a few months later a barber cut it again, after which it did not heal satisfactorily. A few years ago he noticed that the mole was ulcerated and increasing in size. Pain had not been severe in character.

Examination.—On the right side of the face, over the malar eminence, was situated an irregular, depressed ulcer, worm-eaten in appearance, about as large as a silver half-dollar. It presented the appearance of a rodent ulcer. No palpable glandular enlargement.

Operation.—Growth excised. Primary union. Recovery.

Microscopic Examination.—The neoplastic cells were distributed throughout the specimen in two different arrangements. In places there were quite large, irregular nests of cells containing oval or round nuclei that stained fairly deep. The peripheral layer of cells was arranged in a distinctly columnar fashion. There was no restricting membrane, the cells lying in direct contact with the adjacent tissue. In other places the cells had a more or less regular arrangement into narrow strands surrounding distinct acini. In many of these openings were

found blood cells and granular matter. Some of the acini contained a somewhat granular mass which stained slightly with eosin. Round-cell infiltration was quite marked. Some muscle fibres showed hyaline change. Numerous mitotic figures.

Case 8. History.—Mr. McC., aged 74, was admitted January 15, 1907. Ever since he can remember he has had a small mole or birthmark on the left side of his neck, just below the tip of the mastoid process of the temporal bone. Sixteen years ago a woodtick bit him on the mole. He was unable (he thinks) to remove all of the tick, and is under the impression that his present condition is the result of this. Two or three months after he was bitten he noticed that the mole was very tender to touch, and that it was increasing in size. Various preparations were applied; a small ulcer appeared on the mole, which showed a tendency to increase in size and refused to heal kindly, he finally succeeded, however, in healing the ulcer. A few years later he accidentally contused the left side of his neck against the limb of a peach tree; the parts became very sore and ulcerated. The tissues immediately surrounding the mole became indurated and of increased size. He consulted various "quacks" and spent all of his money, but the ulcer continued to get larger and larger. As time went on the growth caused more or less constant and severe pain; pain was especially severe at night. Recently the growth has been increasing more rapidly and has destroyed a large portion of the left side of the neck, posterior to the sternomastoid muscle. He has lost considerable weight.

Examination.—A large, granular, depressed ulcer with irregular, firm margins occupied the left posterior side of the neck (Fig. 4). The muscle was exposed in the central portion of the ulcer; portions of the muscle showed characteristic malignant change. Portions of the margins of the ulcer were undermined. Cervical (left) glands palpably enlarged. The sternomastoid muscle (left) very firm and infiltrated at its upper portion. General condition of patient quite good.

Treatment.—I gave trypsin injections for a considerable time, but with only temporary benefit; the severe pain became lessened to such an extent that the patient could sleep the entire night. Within a short time, however, the pain returned, but was never as severe as previously. The trypsin tratment did not change the condition of the growth, except that it became clean. Owing to illness in patient's family, he was called home about three months after admittance to hospital. Not traced.

Microscopic Examination.—One-half of the specimen consisted of a mass of quite dense connective tissue covered by a layer of surface epithelium. The other half was made up of a more open connective tissue framework, scattered throughout which were numerous small, irregular nests of cells. These nests were not limited by any membrane and were separated from each other by greater or less amounts of adult connective tissue. There was a very general widespread round-cell infiltration.

Pathologic Diagnosis.—Squamous epithelioma.

Case 9. History.—Mr. G. T. W., aged 54, was admitted October 1, 1906. About two or three years ago he noticed a small warty growth on his lower lip. In October, 1905, it began to grow rapidly, and the physician whom he consulted diagnosed it cancer. Acids, pastes and plasters were applied without benefit. The disease continued unabated. He lost weight; appetite poor; pain more or less constant and quite severe.

Examination.—A large cauliflower-like growth occupied practically the entire lower lip and a part of the chin and inferior maxilla in median line. The mouth was apparently free from involvement. The growth was very firm, except in the ulcerated portions. Patient presented a somewhat cachectic appearance.

Operation.—The lower lip in its entirety and the submental and submaxillary glands were removed, and the diseased bone was thoroughly curetted. Superficial tissues of face were approximated and a new lip was formed. Patient developed a pneumonia and died a few days after the operation.

Microscopic Examination.—The superficial epithelium was very much thickened and the papillæ were large. Lying deeper within the tissues were irregular nests of cells containing large round bubble-like nuclei. The cells in the periphery of these nests showed quite a well-marked columnar arrangement. In the center of many of the nests the cells had become considerably flattened and had undergone keratin formation with loss of the nuclei. Round-cell infiltration was very well marked beneath the epidermis and between the cell nests. Very few mitotic figures were found. The submaxillary gland showed slight inflammatory changes.

Case 10. History.—Mr. L. W., aged 58, was admitted August 23, 1906. About seventeen years ago he noticed a small warty-like growth on right half of his lower lip. For years after its appearance it began to grow at a rapid rate and he had it excised. Three years later it returned and in 1901 he had it cauterized. The growth disappeared and did not return until three years later; it then appeared in the form of a small, hard ulcer, which latter soon became of a rapidly destructive character. He tried various so-called "cures," but the disease continued unabated. No loss of weight; appetite good.

Examination.—The entire right half of lower lip had been destroyed. A hard crater-like, ulcerating mass presented itself in this area; the lower teeth, normally covered by the right half of the lower lip, were exposed. The submental glands, as well as the submaxillary glands, were not palpably enlarged. Floor of mouth was apparently free from involvement.

Operation.—Radical excision. Patient recovered. Union was primary. No recurrence up to present time.

Microscopic Examination.—The greater part of the specimen was composed of irregular masses of cells containing rather small round or

oval vesicular nuclei. These masses had no limiting membrane and ramified through the tissue in the form of a coarse network with more or less connective tissue in between. In a number of places the tumor cells had a distinct adenomatous arrangement. Narrow strands of about two cells in thickness formed a network enclosing spaces that appeared to be filled with a secretion. There were several areas in which the central portion of the cell masses had undergone a marked degeneration.

Case 11. History.—Mrs. M. C., aged 56, was admitted October 21, 1907. Many years ago she noticed that she had a mole on the right side of her nose, but, since it did not cause her any inconvenience, she did not pay any attention to it until five or six years ago, at which time it began to increase in size. Pastes, salves and other "frauds" were applied without benefit. The growth rapidly increased in size. Pain was not severe or constant.

Examination.—On the right side of the nose, at about the center, was a brownish, nodular growth, one inch in length and one-half inch in width; it felt tense and firm and was in the skin.

Operation.—Excision under local anesthesia. Primary union. Subsequent Roentgen ray treatment.

Microscopic Examination.—The superficial epithelium was considerably thickened and showed a very great keratin degeneration. There was some parakeratosis.

Case 12. History.—Mr. W. F. R., aged 53, was admitted March 6, 1907. Five years ago he noticed a small, white wart-like growth on his lower lip near its center. He pulled it out, but within a few weeks it returned. The process was frequently repeated. The substance removed was always of the same consistency, spongy-like and closely resembled a wart. Five or six months after its first appearance he consulted a so-called "cancer doctor," who attempted to treat it with his pastes, etc., but without success. The application employed seemed to accelerate the development of the growth. One year ago the growth involved the entire right half of the lip; he consulted a surgeon who excised the lower lip. Within six months the growth returned (?) and rapidly attained the size of a small closed fist. Another surgeon found the inferior maxilla also involved. Three weeks ago the growth on lip and a portion of the inferior maxilla were removed. At present there are evidences of recurrence. Loss of sixty pounds in weight during the past year.

Examination.—Mouth deformed, due to previous operation. There was constant flow of saliva from mouth; at right angle of the very narrowly contracted mouth was a small nodular growth about as large as a pigeon's egg. Glands not palpably enlarged. Floor of mouth not involved. Patient could scarcely open his mouth.

Treatment.—He had been subjected to Roentgen rays, but without benefit. Injections of trypsin were tried, but so many abscesses followed its use that they were discontinued. The lower lip was freed from the inferior maxilla and the growth was excised under chloroform anesthesia.

Patient has not been heard from since he left the hospital. Probable recurrence.

Case 13. History.—Mr. J. T., aged 75, was admitted September 4, 1907. About three years ago he noticed a small wart on the left side of his nose, but, since it did not seem to grow and did not cause him any pain, he let it alone; within a very short time it became an ulcer and grew rapidly. Painful at times.

Examination.—On the left side of nose was a hard movable mass about as large as half of a walnut. The edges of the mass were of firmer consistency than its central portion. The growth presented the appearances of an epithelioma.

Treatment.—Excision under local anesthesia. Primary union.

Microscopic Examination.—The specimen was composed of many small cell nests separated from each other by a slight amount of connective tissue. In many places the nest appeared to have fused, thus forming masses with scalloped edges, resembling rosettes. In the nests the peripheral cells were arranged in a quite regular columnar manner, the central cells being masses together irregularly. Many of the cells were undergoing division. Some round-cell infiltration in the connective tissue.

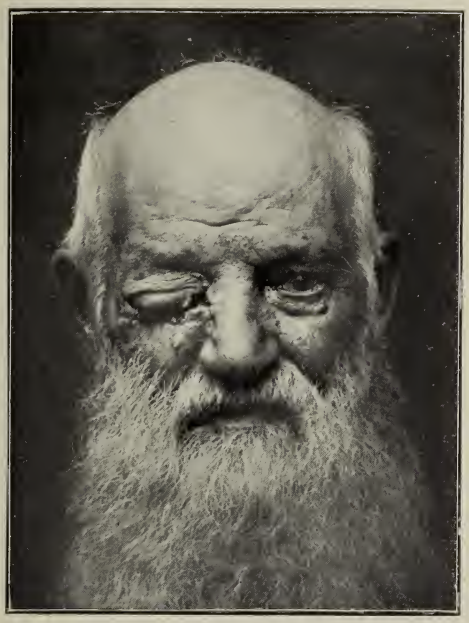
Case 14. History.—Mr. L. B. L., aged 78, was admitted May 12, 1906. Eight years ago he noticed a small wart-like growth on his lower right eye-lid, but it did not cause him any discomfort or did not seem to increase in size until four years later, at which time a small scab appeared. He pulled this off and the wart bled freely. Within a short time the wart began to ulcerate and discharge a greenish, offensive pus, and the parts became swollen and more or less painful. The destructive process extended until the entire lower lid was destroyed; the upper lid was so swollen and edematous that he could not see out of his right eye. No loss of flesh.

Examination.—The right lower lid was practically destroyed. The tissues adjacent to the base of the lower lid were indurated and infiltrated by a growth presenting the appearance of an epithelioma. The upper lid was edematous and obstructed sight of right eye. Eyesight not destroyed. Lymph glands not enlarged.

Pathologic Diagnosis.—Rodent ulcer.

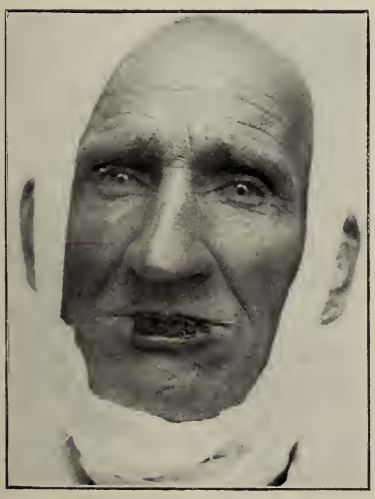
Case 15. History—Mr. C. W. N., aged 59, was admitted June 8, 1906. Was never ill until two years ago when he noticed a small wart growing on penis near urethral opening. A few months later he consulted a physician, who burned off the wart. Contrary to expectations, the wound would not heal. Six months ago he was operated on, a portion of the penis being removed. He has become steadily worse and has lost considerable weight.

Examination.—Patient anemic and looked cachectic. The entire penis had been destroyed and was replaced by a large, foul, sloughing ulcer. The testicles were swollen and the scrotum was edematous and ulcerated



Case XIV.—Rodent ulcer resulting from wart on eyelid.

Case XXI.—Malignant degeneration of wart on neck.



Case XVIII.—Malignant degeneration of wart on lip.

Case XVIII.—a. Trichinæ found in carcinomatous lip.

in places. The inguinal glands were swollen, tender and sloughing. The condition was pitiful and exemplified the distressing result of the physician's failure to do a radical operation intead of a partial one.

Treatment.—Patient's condition did not warrant operation.

Pathologic Diagnosis.—Epithelioma of penis.

Case 16. History.—Mrs. R., aged 70, was admitted December 10, 1907. Sixteen years ago she noticed a small, white, seed-wart on her upper (right) eyelid. It seemed to remain unchanged in size for twelve years, when it began to grow and shift its site from the outer third to near the inner canthus of the eye. Caustics, pastes, salves, etc., had been applied without benefit. Pain was not a prominent symptom. The growth increased very rapidly in size, a small nodule appearing near the margin of the lid.

Examination.—About half an inch above the inner canthus of right eye was a nodular, slightly ulcerating mass as large as a five-cent piece. The growth presented the usual characteristics of a rodent ulcer. On the border of the lid, near the inner canthus, was a small, hard whitish nodule about as large as a pin-head.

Operation.—Excision. Wound healed by granulation. Exposure to Roentgen rays twice a week. Recovery.

Microscopic Examination.—Specimen showed numerous nests of cells varying in size and shape. These nests were distinctly separated by connective tissue. The nuclei of the cells varied greatly in shape and staining qualities; the oval, deeply staining ones predominating. There was a very large amount of round-cell infiltration and of congestion. No attempt at pearl formation.

Case 17. History.—Mr. J. J. D., aged 59, was admitted April 28, 1906. About two years ago he accidentally noticed that he had a small wart-like growth on the back of his left hand; it did not cause him any pain or discomfort until about six months later, when it began to grow. Various acids, pastes and other drugs were applied without success. Five months ago the growth became ulcerated and began to grow rapidly. Two weeks before admission he had a physician remove the growth, but when the sutures were removed, a week after operation, the physician found that the parts had not healed; the wound was gaping.

Examination.—On the dorsum of the left hand, between the base of the thumb and index finger, was an irregular, exuberant ulcer, the size of a silver quarter. Axillary and epitrochlear glands not palpably enlarged.

Treatment.—X-ray exposures were given twice a week for some months. The parts healed and the patient discontinued his visits to the clinic.

Case 18. History.—Mr. G. S., aged 62, was admitted October 14, 1907. Had a wart on his lower lip for twenty-five years, but it did not grow until two months ago. Lower lip had become swollen and the growth was the size of a filbert.

Examination showed patient well nourished and in apparent good health, except for the growth on and swollen condition of his lower lip. Near the center of the free margin of the lip was a scaly growth presenting the characteristics of an epithelioma. The swollen condition of the lip did not appear to be due to the epitheliomatous growth only. The submental and the submaxillary glands were not palpably enlarged.

Having been so frequently impressed with the fact that a wart may suddenly show malignant changes, and appreciating the importance of early excision, the patient was admitted to have the growth removed. One day later, the entire lower lip was excised and the submental glands removed. The silkworm gut sutures were removed on the fifth day. Union was primary.

Pathologic Report.—The epithelium suddenly changed from the normal to an irregular layer of great thickness. Long finger-like projections of cells extended deep into underlying tissues. Throughout the greater part of the growth, the cell nests penetrated down into the muscular tissue and brought about an atrophy of the muscle fibres. Along the advancing periphery of the new growth there was a very marked infiltration of lymphocytes and plasma cells. The cells found in the nests were large and polygonal, and contained a large round or oval vesicular nucleus. Many of them showed varying degrees of keratin formation, and typical epithelial pearls were very numerous. The cells on the surface of the growth showed marked keratin formation and parakeratosis. On the mucous side of the specimen was found a small salivary gland. On the skin side were seen numerous hair follicles, sebaceous and sweat glands. Lying deeper with the muscular tissues were two bodies, circular in shape, with a surrounding rim of homogeneous substance that stained with eosin. This ring enclosed a space in which were found several round and oval bodies that contained cells and nuclei enclosed within a definite membrane. In between these bodies was a small amount of granular pink-staining material. External to the capsule was a slight amount of round-cell infiltration. These masses lay embedded in the muscular tissue, and the adjacent muscle fibers had been flattened in varying degrees. The appearance was that of an encapsulated trichina. These bodies lay quite close to quite a large artery.

Case 19.—G. W., aged 61, was admitted March 25, 1908. Twelve years ago he noticed a small wart near the inner canthus of his right eye. This grew gradually larger, but did not cause pain. Three years after onset it became ulcerated and had attained the size of a silver dime. Quacks applied their preparations without success. A physician excised the diseased area. Two years ago the disease reappeared. The growth has steadily increased in size.

Examination.—Just below the lower right eyelid was an oblong, firm, somewhat scooped-out growth about as large as a pigeon's egg. No palpable glandular involvement. The growth was movable and palpatation did not induce pain.

Operation.—The growth, with a wide area of healthy tissue, was excised. A flap was then turned down from forehead. Grafts from thigh were then applied to forehead. Primary union followed.

Pathologic Diagnosis.—Microscopic sections showed growth to be a rodent ulcer.

Case 20.—C. F., aged 41, was admitted April 6, 1908. In 1894 an epithelioma was removed from his right eyelid. Ten years later a so-called "cancerous wart" was excised from back of neck. Three years later a nodule appeared at site of latter operation. Shortly after second excision the growth reappeared. Roentgen treatment had been of no avail.

Examination.—A large (4x3-inch), firm growth occupied the region immediately below, anterior and posterior to the right eye. Growth presented usual appearance of carcinoma. Submaxillary gland and cervical lymphatics showed enlargement.

Operation.—Patient refused surgical treatment.

Case 21.—W. B., aged 78, was admitted March 11, 1908. About one year ago he accidentally noticed a warty-like growth on the right side of his neck. Recently it began to grow until at present it has attained the size of a hen's egg.

Examination.—A large, firm, nodular mass occupied the region of the submaxillary (r) gland. The general condition of patient contraindicated operation. The growth had every clinical manifestation of a carcinoma. See plates.

Operation.—Patient went home for a few days and died two days later. Autopsy was not obtained.

Case 22.—B. B., aged 84, was admitted February 24, 1908. For many years patient has had a small wart on the dorsal surface of the right hand. The wart has been increasing in size during the past few years. The patient is a manufacturer of wooden shoes, and whenever the wart attained an undue size he would cut off the uppermost portion with his knife. Of late the wart has been increasing rapidly in size and bleeds frequently. It causes him pain and anxiety.

Examination.—Upon dorsal surface of right hand was a growth larger than a silver dollar. It had every appearance of a carcinoma. Epitrochlear gland was not palpably enlarged.

Operation.—The growth was excised and grafts from thigh applied. Primary union followed. No "recurrence" up to present.

Pathologic Diagnosis.—Microscopic sections showed growth to be a squamous epithelioma.

Case 23.—A. S., aged 59, was admitted Jannary 4, 1908. Six years ago she noticed a dark spot, like a mole, on the left side of her nose near nasofrontal juncture. This has increased gradually in size. In 1903 she consulted a Roentgen ray specialist who applied his art for ten months without benefit. The growth has continued to grow. In 1905 a "cancer specialist" was consulted and temporary relief secured.

One year later recurrence was noticed. Patient has suffered more or less constant pain since recurrence was noticed.

Examination.—An ulcerating growth involving the inner half of both (l) eyelids, and the left side of base of nose was found on examination. A silver quarter would cover the diseased area. Growth was a rodent ulcer.

Treatment.—Refused operation.

Case 24.—L. W., aged 55, was admitted in October, 1906. In 1869 patient observed a small wart on his lower lip near the outer third at the muco-cutaneous juncture. Five years after its first appearance it had attained the size of a filbert. A physician excised the warty-like tumor, but about two years later it reappeared. It grew gradually larger until it was as large as his thumb. Whenever roughly handled or accidentally contused, it would bleed. In 1901 a "specialist" "burned out" the growth. Three years later the disease reappeared in the form of an open sore and has continued to increase in size.

Examination.—Practically all of the lower lip has been destroyed by the disease. The inferior maxilla appears free from involvement. The growth had the appearance of a carcinoma. No palpable glandular involvement.

Operation.—Growth excised and new lip made. Patient left hospital in apparent good condition. (In July, 1908, patient returned for treatment. His condition was found to be worse than at previous admittance. See plate. The inferior maxilla is involved. Operation will be performed within a few days.)

Microscopic Examination.—Sections of growth showed it to be a carcinoma.

Case 25.—K. K., aged 58, was admitted June 18, 1908. One year ago she noticed a small warty-like growth on her right cheek. It seemed to become gradually larger. She applied various so-called "remedies" without benefit. Recently the wart has been converted into an ulcer.

Examination.—A small ulcer, about as large as a silver dime, was found on the right cheek near the molar eminence, which had the usual appearance of a rodent ulcer. No palpable glandular involvement.

Treatment.—Refused operation.

It is a pleasure to acknowledge my indebtedness to the Senior Surgeons, Drs. Carson, Lutz and Mudd, for their kind permission to report these cases, and to Dr. McConnell for the pathologic reports, and Dr. Mook for the photographs, and to Mr. Wm. K. Ilhardt for many kindnesses.

These cases, and a study of the literature, warrant the following conclusions:

1. Warts and moles, especially when situated in exposed parts of the body, or when subjected to frequent irritation should be ex-

cised as soon as possible, lest they become malignant and destroy the life of the individual.

2. Just as soon as a wart or mole begins to rapidly increase in size, it is almost always already a malignant growth.

3. The secret of success lies in the excision of the blemish before malignant changes manifest themselves.

4. When wart or mole shows evidence of malignant change, the only hope of success in the treatment lies in *excision of all of the diseased tissues.* "Recurrence" signifies failure to remove all of the diseased tissues at the primary operation.

4826 Delmar Boulevard.

SOME WAYS AND MEANS TO OVERCOME THE PRACTICE OF PRESCRIBING READY-MADE REMEDIES AND PROPRIETARIES.*

BY L. E. SAYRE, DEAN OF DEPARTMENT OF PHARMACY, UNIVERSITY OF KANSAS.

The title of this paper assumes that the prescribing of ready-made proprietaries and nostrums is an evil, and while it might seem to some in place to point out and prove that the evil exists, how this practice is an evil, and to show who are the guilty ones in fostering and promoting it, neither of these points is especially contemplated in the present paper. The practice of prescribing commercial, unethical remedies has been admitted, thoroughly ventilated and criticisms most universally accepted by professional physicians and pharmacists. In presenting suggestive measures to overcome the practice, I have thought it might be profitable at the outset, by way of introduction to answer the oft-repeated question: What right have Physicians, Pharmacists and Scientific Men to practically confiscate the property of the proprietary medicine and nostrum manufacturers? Manufacturers, who have, for example, devised, successfully compounded, manipulated, and through costly advertising, exploited, and distributed certain remedial agents and obtained for them enormous values? Let us take, for example, two well known cases that are now matters relegated to past history. We will take for one, a very common preparation, which has yielded, under its trade name, to a manufacturing company a return of thousands of dollars. This preparation represents what we may call a commonly used and very innocent local application, an ointment base. And, for the second we will take one of the more important and recent organic or synthetic preparations, which we should recognize as a valuable antipyretic, which has had a phenomenally successful commercial experience under a trade name. The question, frequently propounded, is: "What right have scientific men, who investigate medicinal and pharmaceutical preparations, to attempt to usurp the rights, and, in a measure, to confiscate the property of the owners of these substances by producing what some have erroneously called imitations or substitutes?" Herein is involved a principle, and this principle is worth bringing out squarely. To answer the question we would refer to two items of interest, which relate to the Pharmaceutical and Medical professions:

In the certificate of incorporations and in the Constitution of the American Pharmaceutical Association, the objects and aims of the or-

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ganization are set forth in certain simple paragraphs, in substance as follows:

1. To improve and regulate the drug market, by preventing the importation of inferior, adulterated, or deteriorated drugs, and by detecting and exposing home adulterations.

2. To encourage such proper relations among Druggists, Pharmacists, Physicians, and the people at large, as may promote the public welfare, and tend to mutual strength and advantage.

3. To improve the science and art of Pharmacy by diffusing scientific knowledge among Apothecaries and Druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, and encouraging home production and manufacture in the several departments of the drug business.

4. To regulate the system of employment, so as to prevent, as far as practicable, the evils flowing from deficient training in the responsible duties of preparing, dispensing and selling medicines.

5. To suppress empiricism, and to restrict the dispensing and sale of medicines to regularly educated Druggists and Apothecaries.

6. To uphold standards of authority in Education and in the Theory and Practice of Pharmacy.

7. To create and maintain a standard of professional honesty, with a view to the highest good and greatest protection to the public.

The American Medical Association, it is needless to say, has a code of ethics, which emphasizes very strongly the spirit herein involved, and in very appropriate and emphatic language puts itself on record as against empiricism and secrecy in any form of practice.

Bound up, as these organizations are, by a code of ethics, which plainly and unmistakably point to investigation and open-handed publication, as opposed to secrecy and to the locking up of processes and products, it is a logical procedure for these professions to make numerous and persistent efforts, through scientific research, and other means, to eliminate the mysticism and empiricism which have attached themselves to their science in Ancient and Medieval times.

Applying the principle of investigation to the first medicinal product—the local or external preparation referred to—we have found that that preparation, which was locked up for so many years, and produced to its advertisers, thousands of dollars profit, to be a well-known by-product. It was proved that this article was a residue left after distillation of petroleum, a semi-solid substance rich in paraffin, having the consistency of ordinary fats, resembling the latter in many of their physical properties. It was further found that this product was locked up by a trade-mark under the name of Cosmoline, or Vaseline, for which physicians, pharmacists and patients, who lent their aid in its introduction, were obliged to pay several times the computed value of the substance. Furthermore Cosmoline being the property of a manufacturing company, had, in a sense, no "standard" of quality, as this term

is now pharmaceutically applied, and no one could hinder if the whim of the corporation owning it, choose to alter its composition. It should be said parenthetically that the same license (of altering composition) applies to proprietary articles for which there is no such standard. Antikamnia, Antiphlogistine, Bromidia, Liquizone, and what not may not be precisely the same this year as they were last. Uncontrolled by a scientifically recognized and accepted standard, and because of the property rights of the manufacturers, they may be changed in composition if such change should be profitable. It is therefore a perfectly logical procedure for the physician and pharmacist, who demand an acceptable standard, who are opposed to secrecy, who are pledged to promote research and to publish its results, to replace this same unctuous base referred to by one whose standard may be fixed and controlled, and whose price shall be nearer its true commercial value. This has been done. Petrolatum, as an ointment base, has certain Pharmacopœal standards applied to it. And a pound can be bought for less than was formerly paid for an ounce of Cosmoline. The history of this very familiar article, and the application of the same policy of investigation is repeated in the second example above referred to. The official antipyretic, acetphenetidin, which we are now able to control by a standard, can be sold at 25 cents per ounce, when for Phenacetin, controlled by manufacturers, we were obliged to pay $1.25 per ounce.

If an ingenious French pauper, in order to gain some crumbs of bread, invents a flea powder, which he bottles and sells for 25 cents a package (small at that), and it is discovered that it is nothing but wood ashes and dust of the earth, if it is also found to be good for fleas, two things are legitimate; the publication of its composition, and the statement that it is good for fleas—it may become common property. It may be standardized, and for 25 cents one may buy a barrel instead of a small ½ oz. package.

St. John Long, in the early part of the last century practiced as a consumption doctor. His principal remedy was a secret embrocation which he would not permit out of his hands. Investigation proved it to be composed of acetic acid, oil of turpentine, emulsified by yolk of egg, and an aromatic water. This St. John Long's Liniment, well known to-day, is relegated to its proper place, not a consumption cure, but simply a stimulating liniment of turpentine. This preparation had applied to it the same principle by which phenacetin has become acetphenetidin, and cosmoline has become petrolatum. Thousands of preparations have met the same fate by the application of this principle. Bateman's drops, Godfrey's cordial, Hooper's female pills, Lady Webster's dinner pills, Turlington's balsam, Steer's opodeldoc, British oil, and thousands of others of the secret and proprietary class, all have met the same fate when these principles of pharmaceutical and medical ethics have been applied. It has inevitably, in a sense, captured them and divested them of the extravagant virtues claimed for them. No intelli-

gent person will say to-day that science did wrong in capturing and making public, these so-called proprietaries. No one would say that for the benefit of the Professions of Pharmacy and Medicine, and for the public good that it is not absolutely essential that the work of investigation and promulgation should continue and proceed, and that the broadest application of ethical standards of medicine and pharmacy should not be vigorously applied. This principle once admitted it is clear that there is no usurpation of rights. These so-called proprietary rights must yield to the consequence of the higher rights of scientific research and the public welfare. While all this is true it is not to be understood that this higher right allows one to help himself to other people's property, when real property can be proven.

From what has been said, it may appear that one of the ways and means of overcoming the evil of prescribing proprietary and secret remedies has been hinted at. Scientific research and publicity is certainly one of the means of combating the evil. These two elements—Scientific Research and Publicity—characterizes the work of the Section of Pharmacy and Therapeutics of the American Medical Association. This work is now, it is well known, in the able hands of representative men in both professions. It may be said in passing that the Federal and State Food and Drugs Law, acting in harmony with the above principles, have resulted in the withdrawal from the market of hundreds of secret preparations and has checked, very materially, the lower forms of nostrums. To cut off the supply is another means suggested of overcoming the evil.

This project of the American Medical Association[1] is to inquire into the composition and standing of the several medicinal preparations of a proprietary character that are or will be offered to the medical profession, and by comparing them to the requirements embodied in a set of ten rules that have been adopted as a guide, determine, so far as is possible, whether or not the individual preparation, and the firm or firms exploiting the same, are deserving of the patronage and confidence of physicians and pharmacists. The result thus far has been the publication of several small volumes, among them a book entitled "New and Non-Official Remedies," which contains a list of such preparations as come up to the requirements, with such additional information on the composition, properties and uses of the same as might be considered necessary or of advantage for the rational use and control of the several preparations.

The Council was aware of the importance and difficulties of the work to be undertaken, and did not take a step forward without being sure that it might be just to all concerned. It did not dare to hope for perfect results, and could only promise to strive earnestly, honestly and impartially to avoid serious errors of commission and omission.

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1. Jour. Amer. Med. Ass'n, March 4, 1905.

The rules governing the admission of articles were:

"Rule 1.—No article (that is drug or remedy) will be admitted unless its active medicinal ingredients and the amounts of such ingredients in a given quantity of the article be furnished for publication. (Sufficient information should be supplied to permit the Council to verify the statements made regarding the article, and to determine its status from time to time.)

"Rule 2.—No chemical compound will be admitted unless information be furnished regarding tests for identity, purity and strength, and if a synthetic compound, the rational formula.

"Rule 3.—No article that is advertised to the public will be admitted; but this rule will not apply to disinfectants, cosmetics, foods, and mineral waters, except when advertised in an objectionable manner.

"Rule 4.—No article will be admitted whose label, package or circular accompanying the package contains the names of diseases, in the treatment of which the article is indicated. The therapeutic indications, properties and doses may be stated. (This rule does not apply to vaccines and antitoxins, nor to advertising in medical journals, nor to literature distributed solely to physicians.)

"Rule 5.—No article will be admitted or retained about which the manufacturer or his agents make false or misleading statements regarding the country of origin, raw material from which made, method of collection or preparation.

"Rule 6.—No article will be admitted or retained about whose therapeutic value the manufacturer or his agents make unwarranted, exaggerated or misleading statements.

"Rule 7.—Labels on articles containing "heroic" or "poisonous" substances should show the amounts of each ingredient in a given quantity of the product.

"Rule 8.—Every article should have a name or title indicative of its chemical composition or pharmaceutical character, in addition to its trade name, when such trade name is not sufficiently descriptive.

"Rule 9.—If the name of an article is registered, or the label copyrighted, the date of registration should be furnished the Council.

"Rule 10.—If the article is patented—either process or product—the number and date of such patent or patents should be furnished. If patented in other countries, the name of each country in which patent is held should be supplied, together with the name under which the article is there registered."

The following is a list of the names of members of the initiative Council on Pharmacy and Chemistry, American Medical Association:

Arthur R. Cushny, Ann Arbor; C. Lewis Diehl, Louisville; C. S. N. Hallberg, Chicago; Robert A. Hatcher, New York; L. F. Kebler, Wash-

ington; J. H. Long, Chicago; F. G. Novy, Ann Arbor; W. A. Puckner, Chicago; Samuel P. Sadtler, Philadelphia; J. O. Schlotterbeck, Ann Arbor; Geo. H. Simmons, Chicago; Torald Sollmann, Cleveland; Julius Stieglitz, Chicago; M. I. Wilbert, Philadelphia; H. W. Wiley, Washington.

This proposed plan, to eliminate secrecy and quackery, has met, and will continue to meet, with strenuous opposition and vigorous denunciation from various sources. Its ultimate success or failure will, and must, depend largely on the honesty of purpose, good will and assistance of the pharmacists and physicians of this country who are in a position and who are in duty bound to assist in every possible way—but reform cannot come in a day.

It is virtually impossible that any dozen or fifteen men should be able to command all of the information that will be necessary to properly classify the numberless remedies and mixtures that are being offered, and, to properly safeguard the interests of the public, and the professions more directly interested. At the same time every care is taken to avoid any possible injustice to manufacturers. This cannot be done without the active aid and assistance of all that may be interested.

The timeliness of this movement on the part of this National Association is emphasized because of the Reformation in Materia Medica which has awakened the interest of the medical profession.

This reformation required, as did the other work, the coöperation of Pharmacists, Chemists, Pharmacologists and other medical specialists. Of necessity the two works representing the standards for medicine in this country—the United States Pharmacopœia and the National Formulary had to be persistently brought to the attention of physicians. And as a result the so-called Propaganda for the prescribing of U. S. P. and N. F. Preparations, instead of proprietary pharmaceuticals, is the logical and unavoidable result of the better knowledge and more thorough understanding of medicines by the average practitioner who now begins to realize the value of these standard works.

An unfortunate result, however, is this: The incidental exposures of the false and misleading claims of many of the best known proprietaries has inaugurated a campaign of calumny and misrepresentation by certain "interests" who feel themselves hurt. Disregarding the ethical side of this movement and regarding only their selfish interests they let no opportunity pass to spurt their venom against the retail druggist and against the medicinal standards, the U. S. P. and N. F.

The question is not infrequently asked, what is the National Formulary? The U. S. Pharmacopœia most physicians are familiar with. It would seem in place here to give a brief definition of what the National Formulary is intended to be. I will give a practical Pharmacist's definition. One of our eminent Pharmacists was asked to write his definition, and this is his answer:

The book isn't a Pharmacist's book—it's a doctor's book. The Pharmacopœia is a doctor's book, too.

The doctor uses the preparation—the pharmacist makes it for the doctor from the book.

The N. F. is a treasury of good practical things, mostly compounds: the overflow from the pharmacopœias of the world,—sometimes adapted, sometimes transcribed.

Some of the meritorious ideas gleaned from the examination of nostrums are utilized and properly: A good thing in medication should be the nation's or the world's property and not a private hoard. So the book affords an ethical way of using proprietary good things.

The druggist ought not to be the pusher of formulas on the doctor. If the book is of value the doctor should determine the fact for himself.

The first thing he should do is to buy a copy and look it over at leisure. It is astonishing to find how many valuable quarter hours can be gotten out of a formulary.

If medical schools are paying little attention to the teaching of methods of exhibiting medicaments—the required knowledge may be gleaned to certain practical extent from formularies. There is some suggestion to the prescriber on every page.

If he approves the book, as a whole or in part, he should tell his preferred druggist what things he would like to have made up and held in readiness for prescriptions or purchase.

There are, perhaps, 600 formulas in the book. Scarcely a tithe of them are in demand. In different localities probably a differing 5% are used. It would be manifestly important to the pharmacist to have all the formulas ready for calls that might never come. To have a small quantity of each preparation on hand would possibly lock up $600.00 of his money—or $50.00 or $60.00 in annual interest income. Some things deteriorate, and unless used, would be dead loss. Therefore the pharmacist should be advised as suggested.

The mistaken impression that factory-made goods have some occult superiority over the preparations turned out by graduate pharmacists should be dispensed with and not be allowed to obscure the fact that the N. F. preparations are easily made by the practical educated man. The doctor should not allow himself to be "worked"—that's the words by the manufacturer's agent who may argue otherwise. The N. F. goods should be regarded as in the pharmacist's province of manufacturing, as they are.

Referring again to the work of reformation of our Materia Medica and Therapeutics we cannot refrain from quoting the words of Dr. H. C. Wood, Jr., who had occasion to speak upon the importance of the movement at one of the meetings of the Medical Societies. He said:

"Year after year we gather in medical societies and discuss cases showing unusual symptoms, of points of difficult diagnosis, or problems in pathology; but year after year we fail to say anything about the

treatment of the disease. This section itself is an evidenec of the desuetude into which the subject of therapeutics has fallen, for, despite its vigorous activity in the last few years, it still remains the smallest section affiliated with the American Medical Association, whereas it should be the largest after the general Sections on Medicine and Surgery. In the face of such lack of interest among physicians in the art of healing, can we wonder that Eddyism, faith cures, osteopathy and all other kindred schisms flourish so luxuriantly?

Two very different results have followed this slighting of the subject of therapeutics. On the one hand has arisen a group of nihilists, who, because of their own ignorance of the value of medicinal measures, or the means of applying them, stalk up and down the world, proclaiming that all drugs are useless. On the other hand, those who have looked to the leaders of the profession for advice as to curing their patients, being turned away in scorn, have accepted the exalted accounts of those interested in the sale of drugs, and dosed their patients with the unspeakable concoctions of the nostrum monger.

With the former group I confess I have but little patience; the egotistical effrontery of an ignorant workman, who, because he does know how to use his tools, boldly denounces the tool as worthless, excites disgust for his self-conceit rather than pity for his ignorance. To such practitioners I can only say that if they can not treat disease they had better abandon the profession of medicine.

The second result of this neglect by our medical schools and by our medical societies has been the abnormal development of the business of manufacturing secret mixtures. The evils of the traffic in nostrums has received so much attention in the last few years by both the lay and medical press that I feel a hesitancy in broaching the subject of such an oft-told tale; but my excuse is that weeds grow faster than flowers, and that until the last specimen of rank vegetation is uprooted from the garden of medicine we can not cease our vigilance. At present we are in the throes of a crisis in the struggle against the abuse of the trademark and copyright law. Like a sleeping Gulliver, the medical profession has allowed itself to be bound down with innumerable bonds until only with determined effort can it hope to free itself. Thousands of physicians throughout the country have become so much the slaves of the nostrum that they can hardly practice medicine without set formulas, and they allow their practice to be governed by the assurance of the glib-tongued ignoramus who calls at the behest of the drug house to instruct them how to treat their patients.

On the other hand, so accustomed have the proprietors of these mixtures become to the suppineness of the physician who allows his desk to be made the repository of brilliant-hued blotters and his journal a collection of "patent medicine" advertisements, more blatant in their falsehood and indecency than the yellowest of the yellow press, that when a physician dares to utter an opinion contrary to the interests of

the pharmaceutical proprietor he becomes the object of astonishment to the profession and of vituperation by the editorial employees of the drugmakers all over the country.

It is easy to diagnose the disease which afflicts the body medical and it seems to me that the remedy is almost equally plain. If our therapeutics has atropied from lack of use, is not exercise the natural treatment to restore its function?

Of all the sciences on which we might build a system of therapeutics the most important is pharmacology, because, after all, despite the assertion of certain factions, in the great run of cases drugs still hold our chief confidence in the treatment of disease. Therapeusis is an art, but pharmacology is a science. We might logically debate the proposition whether pharmacology is an exact science if the latter term had any meaning. Science is a collection of facts, and a fact is a fact, and no fact can be more true than any other. The difference between the sciences is simply in the number of facts which have been determined for each, and in no realm of knowledge have we touched on the infinite number of possible facts, the truth of which can only be settled by experiment. Pharmacology is a young science, and there are many questions urgently demanding answer, but as far as it goes its facts are as certain and as unwavering laws as those of chemistry or any other branch of natural philosophy. Chronic objectors instance some well-known drug and point to the diversity of effects it exercises in different persons or under varying circumstances. But we find as remarkable changes brought about by dissimilar conditions in every other field of investigation. Tannic acid precipitates many alkaloids from their aqueous solution, but make the mixture sufficiently acid and no visible change occurs. You ask me why it is that the presence of potassium iodide renders iodine soluble in water.

Train our medical students into a true knowledge of the functions of the healthy human body; teach them the character of the changes which are produced in those functions by disease, and teach them what we know of the effects of drugs on the healthy and on the diseased body, and when they understand these facts because they know the possibilities of drugs they will not throw them away as useless; and because they know the limitations of drugs they will not be tempted to wander into the fields of polypharmacy of nostrumgiving."

It may not be out of place in closing to call attention to the address made at Hot Springs, Arkansas, by the President of the American Pharmaceutical Association, who refers in his address to the patent medicine fads, and to the pharmacists and physicians. He said:

"Druggists have suffered in public esteem because they were the distributors of these nostrums, and were supposed to have some general knowledge of their composition. Accordingly the disciples of Mrs. Eddy, psychotherapy, osteopathy, and various other forms of drugless healing, have had their fling at druggists and doctors, certainly not to the advantage of either. In addition to this, many

regular physicians have become so imbued with the newest fads in medical practice as to try to cure all the ills that flesh is heir to by the use of such agencies as sterilized food, sterilized drinks, and sterilized air, with the occasional use of the hypodermic needle and hypnotic suggestion. Serums, toxins, antitoxins and opsonins now hold sway, while old-fashioned and well-tried remedies whose action is understood, are discarded, because rational and scientific therapeutics have been neglected for nearly two decades.

Both professions are interested in discouraging self-medication. Doctors are usually glad to confine their prescribing to preparations made by published formulas, when shown in a courteous manner how they can do so, provided they can also be shown that the articles thus made are of equal reliability with advertised specialties, equally elegant in appearance, taste and all other qualities likely to appeal to a patient. It is not to be expected that physicians will at once change their habits. Persistent, patient, good-natured efforts have to be made to bring this about. But it can be done, and is being done, to an extent that justified the time and energy put into the work.

As to manufacturing pharmacists, we should have them concede the importance of pushing the preparations of the United States Pharmacopœia and National Formulary in place of those possibly of equal merit but made by unknown formulas marketed by manufacturing houses, we yet should see a place for these firms in the economy of our time. There will always be some processes that can be better carried out in a factory, where every possible advantage of machinery, especially trained and minutely organized labor, and all the appliances of the latest scientific knowledge and engineering skill are at hand."

These firms have done pharmacy a service in manufacturing elegant and acceptable products, and yet the advantage of machinery and appliances of the large laboratories has been very much overestimated and unduly lauded by the agents of these establishments, a large proportion of the machinery and other appliances have been directed mainly to turning out very large quantities of material for the market. For example, the manufacture of emulsions on a large scale, and the turning out of compressed pills and triturates. Quantity is the main object of the machinery. It is undoubtedly true that an emulsion is invariably better if extemporaneously and freshly made, and a compressed pill is more soluble when freshly made and less liable to be chemically or pharmaceutically altered when it reaches the patient. Deterioration and chemical change is one of the things to especially guard against in medicinal articles, and the ready-made goods are, to say the least, to be carefully watched.

The speaker then referred to a number of instances where the extravagant claims of the manufacture of proprietary remedies had been exposed, and to questions relating to deterioration, taking up a very important part of the discussion, which was of much interest to those who are working with this interesting problem.

CONSERVATISM IN MEDICINE.*

BY WM. L. BROSIUS, M. D., GALLATIN, MO.

It was Patrick Henry who said: "We have no way of judging the future but by the past."

By reviewing some of the items of history, with which we are all familiar, and considering the attitude of our profession toward them, we may judge whether the conservatism which characterized our fathers was profitable or not; and how we should deal with some of the problems and pretentions of to-day.

Hydrotherapy was used by Hippocrates. Horace tells us of Antonius Musa, the "hydropathic physician" to Emperor Augustus. Celsus and Galen made favorable mention of the use of water in the cure of disease.

During the Middle Ages, Paulus, Paracelsus, and other physicians of note advocated the use of water, and extolled its virtues. Physicians of England during the eighteenth century wrote of water in the cure of disease. And yet we find Vincent Priessnitz, a Silician farmer, was the first to establish a hydropathic clinic and put the use of water, cold and hot, internally and externally, upon a scientific, popular and profitable basis, which, with his hygienic teachings, established a "new system of treatment;" and to this layman we owe much of our present knowledge of hydrotherapy.

Massage is probably as old as the race. Homer alludes to it; the Egyptians used it; the Turks and Russians combine it with the bath. It was the property of the profession for ages, and yet it remained for Pehr Henry Ling, a Swedish poet, as late as the nineteenth century, to formulate a system of "movement cure;" and for the unlettered and obscure Still to impose a crude mixture of massage and suggestion upon an unsuspecting and long suffering people, and to have it dignified, by a legislature of Missouri by making it a "system of practice."

Franz Mesmer was a physician, and together with Father Hell, about 1772, began to investigate the curative power of the magnet. In six years he had attracted attention in Germany and France, and made a fortune by his "magnetic cures." His work obtained the support of many physicians, neither he nor they knowing that his cures were the result of suggestion and not from any virtue in the magnet. Hence he was unable to explain the secret of his success to the commission of physicians and scientists appointed by the French government, upon whose unfavorable report he lost the 20,000 livres offered by the gov-

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ernment. Losing also the public favor, he lived in disrepute and died in obscurity.

It has fallen to the lot of Mrs. Eddy, after purloining bodily "Science of Man," the work of Dr. Quinby of Portland, Maine, to utilize the teachings of Mesmer, and so apply the touchstone of commercialism to the hypnotic condition as not only to give her the reputation of being the greatest healer of modern or any other times, but to enable her to extract from the plethoric purses of the affluent the largest amounts of money ever given to build magnificent temples to stupendous credulity. Upon the same lines, Bishop Fallows, of Emmanuel Church, has established what he calls "Christian Therapeutics," where you can get Christian Science, with the Eddy left out.

If, when Hahnemann promulgated the doctrine of potentialization, or dynamization of drugs by trituration or agitation, thereby imparting a spirit force, the profession had been ready to discover the value of a small dose, and in many instances, no dose, and at the same time point out the fallacy of Hahnemann's reasoning, we would to-day have no such sect in medicine.

Electricity has come to us as a very potent force, transporting us, and transmitting our thoughts, over hill and vale, under and over seas, with and without wires. Some of the modalities of this wonderful force are laying claim to our attention, and are expected to contribute to our therapeutic equipment. Shall the profession lay it under tribute? Or shall we leave its application to the enterprising physicist, who knows little of physiology and less of the pathologic conditions in which it is supposed to be of value, and whose application must of necessity be wholly empirical?

The hydropath, masseuer, hypnotist, homeopath, christian scientist, osteopath, thermopath, the physio-therapeutist and psycho-therapeutist, are all claiming the attention of the public and of the profession as well. All these cults, *pathies* and *isms* are in a large measure the result of the conservatism of the regular medical profession.

While we are contending with disease in its many forms, and facing in personal and, many times, single-handed combat the Grim Reaper, we have not given the attention we should to the pretensions of the unlearned, half-learned and learned but unscrupulous imposter.

Now I believe the regular medical profession is intellectual enough, has the breadth of mind and is generous enough, to consider and appropriate whatever there is of good in earth, air, fire and water for the relief of suffering, and the perpetuation of human life; and but for our conservatism we would be more fully in command of all the forces which contribute to that end.

We should ever be mindful that truth is eternal, and our instructors should investigate without prejudice; discover the truth; eliminate the error; be able to know the possibilities and limitations of things, both old and new, and so set them before the coming doctor, that he may be very

much better grounded and equipped for his calling than we who are going before.

We should not be unmindful of the contributions of our profession to the world's scientific progress, and to the comfort and longevity of man. In fact all the *pathies* and *isms* to which we have referred have not contributed one item to the advancement of knowledge, or the betterment of the race.

They have always been, and will continue to be, like noxious plants in the field, that only consume the soil and contaminate the harvest. All this is true because of our conservatism, our lack of aggressiveness.

When we remember that Harvey kept his discovery to himself for ten years and then suffered professional ostracism; and how Jenner was treated by his contemporaries; and how, when Ambrose Paré tied a bleeding artery the men who should have admired his boldness, strewn his path with flowers, and wreathed his brow with the garlands of a conquerer, said: "Paré is willing to risk a man's life on a string;" we little wonder that the noblemen of our profession to-day, the men who occupy the positions upon the watch towers, are not inspired to explore new fields, because they know that we are so slow to cultivate them.

But let us take courage. May the work of such men as Virchow, Koch, Pasteur, Behring, Reed, Agramonte, Carroll, and Lazear, inspire us to say to our investigators and instructors, "Lead on. We will try to show ourselves worthy of your labors and sacrifices."

DISCUSSION.

Dr. J. M. Allen, Liberty: The doctor has outlined very truly the relation of the profession to the various *isms*. The success of these *isms* has been one result of the attitude of the medical profession. Of all the mistakes that ever crawled into the profession this idea of suggestive therapeutics is one of the worst. It is the foundation of vitopathy, healers, etc. You must bear in mind that in life everything has a physical force behind it, and unless you overcome the physical conditions you accomplish nothing. It is this attitude of the profession that is the cause of the growth of these frauds. So few physicians have the manhood to publicly condemn them. Let the people know that the better element of the medical profession considers these *isms* as frauds and they will vanish before us. Everything vanishes before truth. These things could not grow by themselves or if they did not meet the approval or the endorsement of some of the medical profession. I never let such a matter come before me without I hit it a lick, the best I can.

Dr. John Punton, Kansas City: It is most refreshing to hear such a paper read at the state meeting. At the Kansas Society recently I heard a similar paper, read by a preacher, and I only regretted that it was not read by a doctor instead of a preacher. There is no doubt that every form of occultism vanishes before truth, but every man here knows that "as a man thinketh in his heart, so he is." Every man knows that the mind influences the health, but the real application of it has been

lost sight of to such a degree that it has been left to the charlatans, who have applied it with such effect that the laity are beginning to think that these charlatans are more successful than we. There is no doubt but the medical profession is too conservative toward quackery. We don't like anything that smacks of quackery, much less do we like to use anything that they use. The consequence is that they are plucking the laurels that belong to us. I stand here as an advocate of psychotherapeutics, and if it were used more than it is to-day, many of the cases that the profession fail in, they would be successful in,—and they refuse to resort to this one thing because it smells of quackery. We all want to know what mind really is. Every scientist will tell you that we do not know what mind is any more than we know what electricity is, but because we do not know what it is, is that any reason why we should not use it? We use electricity to light our houses and pull our street cars and we should use the mind to influence disease. Many physicians will go through thirty years' experience and never know that they themselves use this power. Such a man wields a power that he is not aware of, he lives a scientist and dies a fool. Much of the benefit obtained in the treatment of cases of myocardial degeneration is due to psychotherapeutics. He may benefit the patient though he can not cure him. Many patients who can not be cured by surgery may be strengthened and benefited by non-medicinal methods.

Dr. Charles Shattinger, St. Louis: This is a splendid paper. But do not put the cart before the horse. We do not borrow from quackery, quackery has picked up the bones that we cast on the refuse heap. Do not be afraid to go back to the refuse heap and take a bone if you know there is still some meat on it, and do not be afraid to say, "this is *my* bone." Because Dr. Kneipp makes fools walk barefooted in the grass, do not be afraid to give your typhoid fever patient the only treatment that will help, viz., the cold bath. Because Mrs. Eddy has thousands of fool votaries, do not be afraid to enter the sick room with a cheerful countenance. Use every effective method that you can to combat disease and claim it as yours by right, and nobody will dream of your being allied with the quack.

Dr. Brosius, in closing: I want to thank you for the reception given this paper. I had no intention of calling anybody a quack. I said that the ancients believed in the four elements, fire, water, earth and air; that they all belonged to the profession. The doctor has a right to use anything, from the actual cautery to ice, and the thing I wanted to get before you was the fact that this all belongs to the regular profession. I said when I came here that some of the best men in the state would be here with the cream they had been gathering and the only question in my mind was whether I would have a jug big enough to carry it all home. We should encourage the investigator and not look for information to the men who have a commercial interest in these things, and thus be led astray. We should know how to use these discoveries to the best advantage because they are our property.

APPENDICITIS.*

BY WILLIAM S. SHIRK, M. D., KANSAS CITY, MO.

The first point to be settled in the consideration of the vermiform appendix and its pathology, is its identity, what is it, where did it come from, what is it doing here, and what will its future probably be. The appendix is undoubtedly the rudimentary remains of a primitive intestine, the undeveloped distal portion of the primitive cecum.

There was a time undoubtedly in the evolutionary development of man when the food products upon which he must of necessity subsist were coarse, raw, and of a nature poorly suited to the nourishment of man as we now know him. He lived on roots, berries, bark, raw flesh and in fact on whatever he was able to procure. Now this sort of food required more manipulating, and more digesting, to get out of it the requisite amount of nourishment to sustain, than does our nicely prepared, half digested, well cooked, pure food products of the present day. Therefore our ancestor, to accomplish this end, had to have more intestinal surface, more bowel, a greater working force, a more powerful digestive plant than we need to-day, with our scientific methods of preparing clean, healthy, simple and nourishing foods. This primitive intestine was part of this greater plan, but now that the necessity for its presence has gradually disappeared, the intestine itself, like everything disused in nature, is gradually disappearing. Sometime in the future it will probably have disappeared entirely, and appendicitis will have become simply an historic disease.

Anatomy. The anatomy of the appendix, and its anatomical relations to the abdominal cavity and its contents are of the utmost importance to the surgeon.

The appendix is a long, narrow, musculo-membraneous tube attached to the lower end of the cecum at a point corresponding to its inner and posterior wall. It averages 3½ inches in length, its extremes are from 1 to 6 inches, and even 9 has been reported. Its diameter is from ¼ to ½ inch. It reaches its full development in early adult life and atrophies in old age. Its structure is similar to that of the large bowel. Just above the appendiceal orifice is a semilunar fold or reduplication of mucous membrane which is known as the valve of Gerlach, which, however, is not a true valve, but acts like one under certain conditions, that is when the mucosa is inflamed and swollen during muscular contractions of the appendix itself, or when the position of the appendix is such that its attachment to the cecum is at an acute angle.

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

The submucosa is composed of areolar tissue which is composed largely of lymphoid tissue. One of the marked peculiarities of the appendix is the large quantity of lymphoid tissue in its make up, which has earned for it the name of the abdominal tonsil or an extensive Peyer's patch. Its muscular coat is composed of longitudinal fibers and circular fibers.

The peritoneal coat surrounds the appendix entirely and meets at the attached border forming its mesentery or meso-appendix, which attaches to the cecum and the terminal portion of the mesentery. The meso-appendix is a triangular shaped affair, base, free border, other two sides, appendix and cecum. It contains the blood supply, lymphatics, nerves and fat, and presents marked variations in its width, thickness and extent of attachment to the appendix.

In old people, it is thick, fat, opaque; in children it is thin and transparent. It may be attached throughout the whole extent of the appendix, but is usually only attached about two-thirds of the way to the tip, and in some cases it is entirely absent.

In rare cases there has been found a congenital opening through the meso-appendix, through which a loop of intestine may become strangulated, and a case is reported where the appendix became strangulated through a hole in its own mesentery. The blood supply of the appendix is the appendicular artery which arises directly from the ileocolic or postileocecal artery. It passes along between the two peritoneal layers of the meso-appendix, fram base to tip, sending four or five branches directly to the appendix. Some times this artery only extends two-thirds of the way to the tip, leaving an extremely meager blood supply to the tip.

When the meso-appendix is entirely absent, the appendicular artery runs along the appendix beneath its peritoneal coat from base to tip. Some times the appendix has two arteries, one to the base and one farther up, in the meso-appendix, and this fact explains why the surgeon sometimes, after ligating the meso-appendix, gets a free hemorrhage at the base of the appendix. I once had such a case and believe that this must have been the cause of it.

In the female the meso-appendix is sometimes prolonged to the broad ligament, by a fold of peritoneum extending to the right ovary, known as Clado's ligament, containing the appendiculo-ovarian artery, which forms an anastomosis between the appendicular artery and the ovarian artery. This increased blood supply explains, no doubt, the greater immunity in the female against appendicitis. The lymphatics of both of these organs blend in this ligament which explains the reciprocal infection of either one from the other.

The lymphatics of the appendix and meso-appendix are highly developed, and play a most important role in the pathology of this region. This lymphatic system consists of minute capillaries which communicate freely through openings in the muscularis, form collecting trunks, pass

through the meso-appendix and accompany the artery. These lymphatics terminate in the ileocecal glandular group, which is continuous with the mesenteric glands, into the ceco-appendicular group, at the base of the appendix, which is continuous above and behind the cecum with the retro-colic ganglia.

Thus we have free communication through the lymphatic system, to the mesentery, the ileum, the cecum, and through Clado's ligament to the ovary, the ramifications of which are very extensive, especially to the mesentery and the ascending colon and may even extend to the pleura since the lymphaties of the peritoneum connect with those of the pleura through the diaphragm.

I once had a case, man aged 43 years, who had appendicitis, but who would not consent to operation. We were certain that a small quantity of pus was present, but the man improved, the pus was evidently absorbed, soreness decreased and he even got out of bed. He was then taken with violent pain in chest, developed pleural abscess and again refused operation; abscess ruptured into lung and he again improved, but in a few days he had thrombosis of right leg which involved entire leg, and he died. I simply cite this case to show the possibilities of this disease.

The nerve supply to the appendix is from the superior mesenteric plexus, which also supplies the small intestines, hence the pain which may be present in any portion of the abdomen, before finally settling down to the immediate region of the appendix.

The pericecal fossæ are three in number and sometimes are the cause of quite a little trouble and embarrassment to the surgeon.

They are pouches formed in the ileocecal region by certain folds of peritoneum. The appendix may be so concealed in any one of these fossæ that it may be thought to be absent, or it may constitute a retroperitoneal hernia.

Whenever the appendix cannot be found you may suspect the pericecal fossæ, which are as follows:

1. The ileocolic fossa lies above the ileocolic junction, and is made by a fold of peritoneum passing across the ileocolic angle. It lies too far away to conceal the appendix except in a small percentage of cases.

2. The ileocecal fossa lies behind a fold of peritoneum at the angle of the junction of the ileum and the cecum. The mouth of it is usually large enough to admit two fingers. Its depth varies greatly and may extend up behind the ascending colon as far as the right kidney. This is the fossa which is most likely to contain the "lost" appendix.

3. The subcecal fossa is behind the cecum and colon and to demonstrate it, it is only necessary to raise the cecum. It is not the hiding place of the appendix as often as the ileocecal fossa.

Positions of the appendix. The appendix should lie normally in the right iliac fossa; however, it may be found any place in the abdominal cavity from the liver to the pelvis.

In 40 per cent. of the cases, the appendix will be given off by the cecum at a point corresponding to its inner and posterior wall and will lie hidden behind the ileocecal junction.

In 30 per cent. of the cases, the appendix will be found ascending vertically behind or lateral to the cecum and ascending colon and attached to the dorsal wall of the large bowel.

If in these cases the colon happens to be adherent, the appendix will occupy an extraperitoneal position. Frequent cases of appendicitis when the appendix is in this position is said to be due to the unusual amount of friction from the psoas muscle. In 20 per cent. of the cases the position of the appendix is pelvic, due to low position of the cecum and a long mesentery.

The position of the appendix may vary in its relation to the abdominal cavity on account of arrested development of the cecum in the fetus. The cecum while migrating from the left side of the abdominal cavity to the right, may be caught up under the liver behind the umbilicus or in front of the right kidney.

If the cecum is extremely mobile, it may occupy the pelvis. Naturally the appendix follows, therefore these facts are of real practical value in the symptomatology of appendicitis.

The variations of the appendix in its relation to the cecum depend upon the type of cecum and the length of the meso-appendix.

In addition to the above mentioned positions, if the mesentery is long, it will give the cecum a wide range of motion, and may account for the appendix being found in umbilical, femoral, or inguinal herniæ on either side.

The question naturally arises why is this appendix, which is of such relative insignificance as an abdominal organ, so important from a pathological stand point.

The answer can be found in citing the three main anatomical causes of appendicitis, which are defective drainage, defective structure and defective blood supply.

Defective drainage. The length of the appendix and its extremely small lumen, coupled with the fact that the distal end is blind, makes for very poor drainage, add to this the fact that the only open end is attached to the cecum, the very center of infection, also this open end is guarded by a valve which, when inflammation is present or the appendix attached at an acute angle, closes up and all drainage is eliminated, in short at the very time when drainage from it is most needed, drainage becomes an impossibility.

Again, the fact that a short meso-appendix, may cause the appendix to twist or curl up, makes for poorer drainage in many cases.

Defective structure. The appendix is composed largely of lymphoid tissue, which has a low vitality and resistance, and is therefore prone to bacterial invasion.

We have here a particularly susceptible tissue, contiguous to a particularly infectious center.

Again this lymphoid tissue is most developed in early adult life, when appendicitis is most common, and atrophied in old age, when appendicitis is least common. The lymphoid tissue is most developed at the distal end of the appendix; this, with the fact that the distal end has the poorest blood supply, explains why it is the seat of the maximum lesion in appendicitis.

Defective blood supply. The appendicular artery is a terminal artery. Twist up the meso-appendix and you have thrombosis of this vessel, which is not compensated by any anastomotic aid. Obstruction of this vessel means gangrene. The appendicular artery in most cases passes only two-thirds of the way to the tip, leaving it as before stated, with poor blood supply.

Appendicitis may cause intestinal obstruction by its tip adhering to some neighboring peritoneal surface, and forming a band under which a loop of gut may hernia.

I had a case coming in this class, which did not hernia but which was never the less interesting. A young Mexican, 21 years of age; several slight attacks abdominal soreness, accompanied by slight nausea. Pressure at McBurney's point caused pain in region of gall bladder. Pressure over gall bladder caused no pain at all.

I made diagnosis of appendicitis and advised operation. He communicated with his father in Mexico, who had him return home, and then took him to a surgeon in San Antonio, Texas, who operated upon him and wrote me saying that the tip of the appendix was firmly adhered to the border of the liver.

The causes of appendicitis are those given above, with the addition of an infection. Other causes, such as traumatism, sometimes act as an exciting factor.

Symptoms and Diagnosis. The symptoms of appendicitis are four in number: Pain, fever, nausea and rigidity of the right rectus muscle.

The diagnosis depends mainly upon the above four symptoms, although the history of former attacks and a knowledge of the possible wide range of positions which the appendix may occupy, often helps out.

Osler says that 19 out of 20 cases of pain in the belly is appendicitis.

Prognosis. No living man can give the prognosis of appendicitis, except to say that if operated upon the first day, they will practically all get well.

Treatment. The treatment of this disease is surgical. The best time to operate is the earliest time possible.

Binney says, you must operate in 48 hours, but it is better to operate in 36, and still better in 12.

Murphy says, you should always operate; that the patient is safer with the surgeon than with the disease.

In my own practice, I always operate immediately if I can gain the consent of the patient.

In the first day or two of the attack you have a sick appendix, and after that, you have a sick man, which makes some difference.

The only medical treatment in this trouble is not to give any, and especially do I desire to protest against the use of cathartics, which can do no good, and may do a great deal of harm. We can hardly call gastric lavage and the use of enemata, medical.

If for any reason the case cannot be operated upon, rest in bed, ice bag and starvation.

Operation. I still use the intramusculor incision for the reason that I got in the habit of using it, and have yet seen no good reason to give it up. I like the McBurney incision, or rather an exaggeration of the McBurney incision, that is cutting in a little farther to the right, because if you happen to have a very short cecum, not very mobile, in making this incision, you are nearer the plica cæcalis, which attaches the cecum to the abdominal wall laterally, and thus you are more sure to be able to draw the end of the cecum and the appendix out of your wound.

I have been embarrassed in cutting directly over McBurney's point by being unable to get the cecum out and having to extend my incision until I could, or having to use a dangerous amount of traction upon the bowel to get it out.

In regard to the treatment of the appendix, I prefer the following method:

Clamp the appendix with a Ferguson pile clamp and crush it. Tie with plain catgut after removing clamp, cut off appendix, apply carbolic acid, and alcohol, and then apply double purse string.*

However, many surgeons are using the simpler method of merely tying and cutting. I do not believe this method is as safe as the silk ligature tightly applied may cut through an inflamed appendiceal stump, or may cut it, if swelling takes place after operation.

The question arises, what do you do when you find pus? That depends upon the quantity, the amount of adhesions and the condition of the patient, and I will say in connection with this class of cases that while good sound judgment, carefully exercised, is valuable to a surgeon in all his work, it is no more valuable in any other class of cases than this.

If a small quantity of pus is present, it is well to wipe it out carefully with moist gauze, and remove the appendix as usual, but I believe

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*The object of tying with plain gut ligature before invaginating is to guard against a possible hemorrhage; the gut ligature remains in place long enough to make hemorrhage into the bowel impossible and then slips off into the gut. The object of the double purse-string is to guard well against tearing out on account of possible gaseous distention, and should be made with fine silk or linen celulose.

that when a large quantity of pus is present it is often the part of wisdom to drain carefully and not go farther.*

A great hard mass of adhesions is, to me, the worst trial of all. Breaking them up to find the appendix at the center of the mass, is sometimes a dangerous business.

If the patient has had several attacks, these adhesions may be found even in the early operation, but in first attacks, they are not present early.

If you are called in late, or for any reason cannot operate in the first forty-eight hours, then I believe it is wise to wait and watch, because it is at this time that your mass of adhesions have formed about your appendix, with a possible few drops of pus.

I believe it to be better judgment to wait in these cases, because, as I have stated, breaking up a mass of adhesions is sometimes very dangerous, and I would prefer to allow the inflammatory process to subside if possible, and operate in the interval, or would even prefer to allow a pus cavity to form, which would in all probability find its way to the abdominal wall, and be easily evacuated.

I forgot to remark, in passing on the intra-intestinal method of tying the appendix, that I have had no experience with it, and do not believe I want any. Some ingenious chap comes forth with a method and a special instrument to be used in punching a hole in the gut, turning the appendix wrong side out, tying it from inside the bowel and so forth. I have had no opportunity to post myself upon what others think of this method, but personally, I believe this party has allowed his desire to be an originator to out-strip his good sense.

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*When you cut down upon a large abscess and deem it unwise to do anything more than drain, it is best to make a small incision and drain through it, and do no manipulating. When you find a small abscess and deem it safe to remove the appendix after wiping out, it is wise to close up the original incision and drain through a stab wound to save a possible hernia.

PRIMARY CHOLECYSTITIS FROM TYPHOID INFECTION.*

BY J. D. BRUMMALL, M. D., SALISBURY, MO.

It is not my intention to give you a picture of cholecystitis and I shall only mention the etiology and symptomatology in an incidental way. Instead of saying what I have to say about the subject and then giving you the history of a case, I shall give you the history of my case and then touch upon some points that may not be brought out in its recital.

I was called April 25, 1908, to see Mrs. D., age 32. Family history negative. Father is living at 84 years of age. Mother died at 36 years, in confinement. Five sisters living and well. Patient has been married since 1900. Has had one premature birth and has two living children; the youngest was born January 4, 1908. She has not been sick enough to call a physician since childhood, except a case of tonsillitis two years ago, and her confinements.

Some ten years ago and before her marriage, she was quite fleshy and took an obesity cure of her own selection (she does not remember the kind) which reduced her weight from 178 to 135 pounds, and caused her to look right badly, but she felt quite well. She soon regained her weight but does not appear nearly so fleshy. At times she has had a cramping of the stomach which yielded to household remedies. Since 1900 I have prescribed for her once or twice for lagrippe, and two years ago treated her for follicular tonsillitis. Otherwise have not seen her except in uncomplicated confinements.

I was called April 25, 1908, to see her. She complained of general aches but no headache at this or any other time. Pain in right side over liver and posteriorly; some tympany and pain on pressure over the appendix and region of the gall bladder. There was engorgement of lower lobes of both lungs, especially the left. Temperature 99½, pulse 120, very weak, and great prostration. These symptoms continued with increasing severity for four days, when tympany was quite uncomfortable. Pain over the appendix and gall bladder much increased, the lung condition amounting to almost a double pneumonia. Temperature ranging from 101 in the morning to 102 and 103 at night. Pulse 120 to 130 or more. There was complete anorexia, great prostration, chilly sensations but no rigors, perspiration very profuse, obstinate constipation, not much sick stomach but occasional vomiting and without regard to contents of the stomach or time of feeding, having more relation to the time of bowel movements or before them. This condition existed for about four days when we had a gradual improvement for four days, the temperature becoming normal, tympany disappearing, pain over the appendix subsiding, but a tender point over the gall bladder remained with some tumefaction, the rapid pulse, loss of appetite, sweating, and occasional vomiting continued. This improved condition

*Read before the North Missouri Medical Association.

with a normal temperature continued for four days, all of which time the pulse was not less than 120, when we had a complete reproduction of the preceding attack minus the lung symptoms. On May 25th we had a temperature 99 in the morning, 101 at night, pulse 120—never less. Tympany very slight, pain over appendix and gall bladder with tenderness on the right side posterior and back of the tumefaction which could be felt in front over the gall bladder and liver, for now it was hard to define the outlines of the tumefaction. Loss of appetite, free perspiration, and vomiting once in 24 to 48 hours.

On May 26th there was some tenderness over spleen. From this time until June 1st there was a gradual improvement in temperature and pulse. June 7th being the first day with an absolutely normal temperature and a pulse as low as 80. The other symptoms had gradually improved, the constipation and tympany had almost subsided, likewise the tenderness over spleen, appendix and right lumbar region. Tumefaction over gall bladder was subsiding yet it can be felt now (June 18th) and is still tender. Appetite is fair but she still vomits occasionally. Sweating has subsided and patient is up and gaining strength.

This case at first looked like lagrippe with liver, lung and intestinal complications; then the question arose about appendicitis, cholecystitis, and then of post appendicular abscess and typhoid fever.

There are not many cases of primary cholecystitis from typhoid infection reported in our literature, and as this case looked so much like one I thought I would report it.

The gall bladder may be infected from many sources and many different bacteria. If infected through the common duct, it is likely to occur when there is an acute disturbance of the digestion as at other times the secretion of the duodenum is of a sterile character. If through the portal vein the disturbance is likely to be in the lower part of the bowel, as from Eberth's or colon bacilli, or from the appendix, we may get the infection through the hepatic artery and hepatic duct, in other words from the blood, in which case it is caused from the influence of the toxins on the liver tissue causing them to decay and allow the bacteria to find a lodging, as the hepatic tissues resist the bacteria themselves.

There are two cases reported by Osler in 1898. Dr. O. Wilson in the *Journal American Medical Association,* May 16, 1908, calls attention to the rarity of these cases and also to a number of cases which had been reported. We all appreciate the fact that the Eberth bacillus may be in the bowel for some time in large numbers and yet the host never have typhoid fever. The most striking instance of this kind was reported at the late meeting of the American Medical Association at Chicago, wherein it had been traced to a nurse in New York who had infected 26 cases with typhoid fever. And she has been in the observation ward for the last sixteen months, during which time her dejecta has never been clear of the bacillus, and yet she has never shown any symptoms of the disease.

VAGINAL CÆSAREAN SECTION: WITH A REPORT OF SEVEN CASES.

BY JOHN G. SHELDON, M. D., KANSAS CITY, MO.

It may happen, in the obstetric practice of any physician, that, with a contracted cervix and absence of labor pains, a rapid emptying of the uterus is essential to preserve the life of the mother. I refer particularly to: 1, severe eclampsia without uterine contraction or cervical dilatation; and 2, placenta previa with profuse bleeding and a rigid contracted cervix. In such cases, gradual dilatation is too slow, and rapid forcible dilatation is likely to result in too much laceration of tissue; it can not always be accomplished satisfactorily and often the proper instruments are not at hand. Abdominal Cæsarean section meets the indications but in the class of cases under discussion, and with a normal pelvis, I believe that vaginal section should have the preference. In the matters of time, hemorrhage and safety, the abdominal operation has no advantages over the vaginal which is easier to accomplish and is associated with less shock.

I shall not describe the technique of vaginal Cæsarean section as recommended by Duhrssen, or discuss the modifications of Dederlein, Lundsenbein and others, but shall give my personal experiences in seven cases in which it was deemed advisable to resort to vaginal Cæsarean section or the vaginal hysterotomy of Lundsenbein.

About six years ago there occurred in my practice in Telluride, Colo., a case of central placenta previa with profuse spontaneous bleeding at the seventh month. There had been no uterine contractions and the cervix was rigid and not dilated. The patient was anaesthetized and the vagina surgically prepared. A volsellum forceps was attached to the anterior lip of the cervix and a transverse incision made in the anterior vaginal fornix between the bladder and the uterus. Then with a piece of gauze on the finger the bladder was separated from the uterus. I then clamped the anterior portion of the uterus with two large straight stomach forceps—placing one blade of the clamps in the cervical canal and the other between the uterus and bladder. The uterus was then cut between the clamps with scissors as high as the separation of the bladder. The clamps afforded a means of traction and at the same time prevented bleeding from the cut uterine surface. When the uterine incision seemed sufficiently large, the clamps were removed, the hand introduced into the uterus through the placenta rupturing the membranes and grasping the child by the feet. Version and delivery were easily and quickly accomplished. The placenta was then removed. The uterine incision was united by a single continuous layer of catgut sutures and the transverse vaginal incision closed. The woman recovered but the child was dead.

In July, 1904, Drs. A. Johnson and H. M. Collins, of Montrose, Colo., called me to see a case of eclampsia in a woman eight months pregnant. The convulsions were severe. They had been continuing for 24 hours. The cervix was firm and contracted. A procedure identical with that described in the foregoing was carried out. The child died in a few hours. The mother recovered; but on the second day blood and serum collected between the bladder and uterus. This was evacuated by removing some of the sutures closing the transverse vaginal incision.

The third case, which occurred in the practice of Dr. B. B. Slick, of Ridgway, Colo., was one of placenta previa with hemorrhage apparently at full term. Vaginal section was done, and both mother and child survived. In this case, I left both ends of the transverse vaginal incision open so as to provide against the accumulation of material between the bladder and uterus.

In August, 1907, while at Osage, Iowa, Dr. P. P. French, of Rudd, Iowa, called me to assist him in delivering a case of placenta previa at full term. The bleeding had been profuse, and the patient was in an extremely bad condition. The cervix was sufficiently dilated to admit one finger. No anesthetic was given. With a pair of scissors I cut the cervix and anterior wall of the uterus—disregarding the bladder according to the advice of Lundsenbein—delivered the child and removed the placenta. It was found that the bladder had been cut. The uterine incision was sutured, and the rent in the bladder closed. The mother and child recovered; but a small vesico-vaginal fistula remained. Dr. A. Aigloff, of Mason City, Iowa, successfully repaired this later. The procedure in this case seemed very "unsurgical," but I believe that it was demanded on account of the precarious condition of the patient. It, however, met the immediate indications. I have done the same thing once since and would not hesitate to repeat it if conditions demanded for a living patient with a wounded bladder is preferable to a death.

Cases V, VI and VII were cases of eclampsia occurring in Kansas City during July, 1908.

Drs. O. M. Longenecker and B. T. Sharp, of Rosedale, Kansas, called me to see a case of eclampsia occurring in a primapara 34 years old who was seven months pregnant. She had been treated for pre-eclamptic symptoms for two weeks, but on the afternoon I saw her she was almost blind and had had four convulsions following each other in rapid succession. The cervix was rigid and contracted. The operation was done as described in the earlier cases. The mother recovered but the child was dead.

Case VI occurred in the practice of Dr. B. T. Sharp, of Rosedale, Kan. The woman was a primapara 21 years old and had had 15 convulsions during six hours. There was no dilatation and the cervix and vagina were markedly edematous. On account of the bad condition of the patient, the uterus was divided without making the transverse

vaginal incision. The child lived 5 weeks and died from intestinal troubles. The mother had five convulsions following delivery. She developed infection in the incisions and ten days after delivery a vesico-vaginal fistula occurred. She recovered and we successfully repaired the fistula.

Case VII was that of a primapara 27 years old who without previous medical attention suddenly had a convulsion. She was nearly at full term. Treatment for 12 hours was of no avail, and at this time a second severe convulsion occurred. There had been no labor pains and the cervix was rigid and contracted. The operation was performed in the usual way. The mother recovered but the child died in a few hours.

Now I believe that in certain selected cases, vaginal Cesarean section is a very valuable procedure. It should only be done when immediate delivery is demanded and the cervix contracted. It can be performed, with comparative safety, by one who is not a surgeon. I believe that the general practitioner should make use of it without hesitation for it meets the indications and offers little risk excepting that of injuring the bladder—and a wounded bladder is a trivial consideration when a woman is rapidly bleeding to death, or quickly succumbing to the eclamptic state. No so-called specialist could justly criticize anyone for injuring a bladder in an attempt to save a case of placenta previa or severe eclampsia.

I offer some suggestions for those who do this operation for the first time: 1. In cases of eclampsia, after the child is delivered, remove the placenta at once unless hemorrhage is severe. Wait until the uterus begins to contract, say 10 or 20 minutes, then remove it and suture the incisions. Bleeding is apt to follow if the placenta is removed too soon.

2. Do not suture the entire transverse vaginal wound between the bladder and uterus because serum may accumulate between these organs. Suture the middle part of the incision and leave both ends open for drainage.

3. Do not hesitate to divide the uterus freely, even if the bladder is wounded, if conditions demand it. Save the bladder if this can be done quickly, but do not delay the operation in the serious cases. Lundsenbein (*Muenchener med. Wochen.,* June 9, 1908) recommends division of the uterus without preliminary separation of the bladder, stating that this viscus will in most instances retract spontaneously and escape being wounded. He calls this operation—without the preliminary transverse vaginal incision—anterior hysterotomy.

ACCIDENTAL VACCINATION OPHTHALMIA.

BY A. E. DERWENT, M. D., CLINTON, MO.

I think the following case worthy of report, for the reason that very little literature can be found on this subject.

The patient was a man 21 years of age, who lived in the country where a good many cows are kept. I am indebted to Dr. F. F. Netherton, of this city, for bringing this case to my attention, as an unusual case of eye trouble. About one week before seeing a doctor, patient noticed a severe smarting, burning sensation in left eye. This gradually grew worse, and the eye commenced to swell, both lids, quite rapidly. Two or three days after this he thought there was something in his eye.

Examination showed some muco-purulent secretion, and a feeling of a foreign body under upper and lower lids; the lids were difficult to separate and were immensely swollen; pupil contracted, cornea clear, iris red; on inner lower canthus, an ulcer, dirty looking with ragged edges, and filled with secretion, extended up to the limbus of eye, but did not infringe upon the cornea. On slightly raising the upper lid, I found the edge of a yellowish gray membrane; loosening the edge caused a very slight bleeding. Suspecting diphtheria, smears were made and careful microscopic examination. Examination also made of nose and throat with negative results. After finding no diphtheria baccilus, next day patient was advised to take an anesthetic for further examination; this he did and on raising the lid, my assistant retracting upper lid rather forcibly, a membrane was removed with a small probe and forceps, with very little bleeding.

The membrane measured 10 m.m. wide, 24 m.m. long, 2 m.m. in thickness, very tough and leathery. A one per cent. atropine solution was instilled into the eyes, two drops every six hours. Ulcer was cleansed with 2 per cent. sol. arg. nit. once daily; 20 per cent. argyrol was given patient to use every 6 hours, and boracic acid solution to bathe eyes. The ulceration improved rapidly, but the swelling did not disappear for four weeks.

On questioning the patient, he said he was holding a calf by the nose, and that there were crusts on its nose, some of which pulled off; he remembered rubbing his eye and of having a burning sensation following, which confirmed the diagnosis of cow-pox inoculation.

Cases similar are reported by Dr. Reimer Schmitz, and Drs. Weis and Aron, one or two cases with severe involvement of cornea, and one case of blindness.

The fact of this complication of the eye should not be overlooked by the general practitioner as the difficulty of diagnosis is not great.

ECHINACEA ANGUSTIFOLIA.*

BY J. W. CLARK, M. D., CARTERVILLE, MO.

Echinacea angustifolia, also known as black sampson and purple cone flower, and often vulgarly called negro-head, is a perennial herb of the order "compositæ" growing in the western portions of the United States and Canada, especially on the prairies and up-lands. The best quality of the herb is found in Nebraska. It is somewhat smaller than usual, the stout erect stem ordinarily growing to a height of 18 or 20 inches, leaves lanceolate to almost linear, disk at first convex becoming ovoid, and receptical conical. The root is the part used in medicine from which is obtained a fluid extract and specific tincture, the latter being prepared by the Eclectics who first introduced it to the profession. The credit for the discovery of its medical properties belongs to a Dr. Meyer, of Nebraska, who had used it as a remedy for sepsis, especially snakebite, since 1870. Its antidotal properties in snakebite had long been known to the Indians, however.

When a preparation of this remedy is tasted a somewhat pungent sensation is imparted which is soon followed by a tingling sensation similar to that produced by aconite, which persists for 20 or 30 minutes. It is non-toxic and non-irritant and either preparation may be used in doses ranging from five or ten minims to a dram. In the smaller doses it is one of our best alteratives as it not only arouses all glandular activity, but is directly antagonistic to all conditions of sepsis or toxemia. The former action is demonstrated by the fact that after its administration all secretions and excretions are increased and normal metabolism established, thereby preventing autointoxication in conditions predisposing to it, and speedily removing it when present, while the latter action is proven by the fact that the larger doses are directly antidotal to animal poisons such as snakebite, uremia or septic infection of any kind.

The specific tincture prepared by Lloyd Bros., of Cincinnati, and the normal tincture prepared by the Wm. S. Merrell Co., of the same city, are used in the same dosage as the fluid extract. Preparations of the "rudbeckia lanciniata," a somewhat similar herb growing in the eastern United States, should not be confused with echinacea which grows only in the west.

It is to be regretted that the discoverer of its virtues kept his discovery a secret for mercenary purposes, so it was not until 20 years later that the profession through the Eclectics, became apprised of its therapeutic properties. It is not only a glandular incitant and toxin eliminant, but is an antiseptic as well, as may be demonstrated by the fact that infected wounds or ulcers soon become sterile and heal under its topical application.

Chronic varicose ulcers although frequently intractable to the usual methods of treatment, are often promptly healed if echinacea be applied full strength, although it is better to administer it internally also in such cases for the purpose of removing any constitutional dyscrasia that may be present. For the latter purpose the smaller alterative doses are sufficient.

Bedsores, many forms of eruptions, particularly those of a toxic character or depending on some constitutional dyscrasia, or even gangrene, are especially amenable to echinacea when used internally and applied locally.

My first personal experience with it began in 1895. My first active use of it did not begin, however, until about 8 years ago when I employed it in a case of typhoid fever which I had abandoned all hope of saving. The case was that of a boy, aged 14, of a poor ignorant family that had postponed calling a doctor as long as possible. The toxins had already accumulated in his system until I had little hopes of cleaning it by the usual methods. Another week passed leaving the outlook still darker. Counsel was then called and echinacea suggested. Was very willing to try any suggestion offered although I really thought it foolish to expect any favorable results from it. The case continued to live almost in a comatose condition another week, with returning secretions, however, which caused me to wonder if he really did have a chance to recover. To my great surprise he did recover and from the experience I have had with echinacea since I am convinced it saved his life.

While I am well aware of the fact that in typhoid fever recovery sometimes occurs to the surprise of the most optimistic, yet in this and other profoundly toxic cases, apparently in a moribund condition, I have been so astonished at the results of its use that I have come to regard it as one among the twelve most valuable therapeutic agents within the reach of the physician as a life-saver.

Typhoid fever being prone to favor the accumulation of toxins during its protracted course, presents indications for its use to a typical degree.

If used prior to the systemic intoxication the latter, with its delirium and numerous other manifestations, is prevented, while if used after the onset of the toxemic state the latter will clear when no other remedy can clear it.

Only personal experience with its use under the latter condition can demonstrate to the skeptic the veracity of the latter assertion.

What I have said relative to its antitoxic properties in typhoid fever obtains also in meningitis, pneumonitis or any other acute infectious disease. In other words it is more nearly a general antitoxin than any other remedy.

Aside from having used it personally in typhoid fever I have during the past eight years employed it in the treatment of erysipelas, puer-

peral septicemia, meningitis, uremia, general septicemia, variola, scarlatina, rhus poisoning, varied toxic conditions with skin manifestations, and as an alterative in the dyscrasias.

In my experience with it I have been disappointed as little as in the use of any remedy I can think of. In syphilis, scrofula, cachexia and the various dyscrasias, if used in alterative doses it will rarely disappoint; in the acute infectious or exanthematous diseases or sub-acute toxic conditions, it will certainly please; while in the profound toxemias that threaten speedily to overwhelm the vitality, its use will surprise one who has not witnessed its action. In such cases it is a life-saver, without a substitute. Those who have never employed this remedy may think I am somewhat over-enthused on the subject but I have endeavored to stick tight to facts as I have found them in my experience with it. All I can ask of the skeptics is that they give it a fair and impartial trial.

During toxemic conditions, subacute in character, such as is so often seen in typhoid fever or other infectious fevers of a severe character, ten drops repeated every two hours is sufficient. As a glandular alterative and incitant and preventive of toxic conditions, in diseases predisposing to them, this dose need only be repeated three or four times a day. In profoundly toxic states, however, I would recommend half dram doses every two hours until the toxic condition is under control.

When we take into consideration the fact that death occurs in acute infectious fevers almost wholly because of the paralyzing influence of the accumulated toxins on the cardiac and other ganglia of the sympathetic system that control vital processes, it becomes quite apparent how exceedingly valuable is the remedy that harmlessly removes such accumulated toxins and effectually prevents any re-accumulation. In diphtheria we have a specific antitoxin. Echinacea may not be a direct or specific antitoxin in a strict sense to any special infection, but I am quite certain it is the best general antitoxin we have to-day. That it is also one of our best glandular alteratives I am equally sure.

Of the proprietary compounds of echinacea such as "ecthol," "echitone," "echifolta" and all others, I simply mention to condemn on general principles as I condemn all proprietary or patent preparations or nostrums.

Some of them may be good but it is certainly unscientific for the physician to prescribe them and reflects on his knowledge of materia medica and therapeutics.

Physicians in this enlightened country at this age should certainly be qualified to formulate their own compounds which should be better adapted to their cases than any ready-made product.

Knowing as I do from more than 8 years' use of echinacea that it does possess the valuable properties just described, I shall feel re-paid for my efforts if this induces a single physician to give it a fair and impartial trial.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

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EDITORIAL

PROPOSED MEDICAL LEGISLATION.

The State of Missouri is unfortunately not among those states in which vital and mortuary statistics are being properly collected. The value of these statistics from the legal and commercial standpoints, is so great that their medical importance in regard to the existence and spread of contagious and infectious diseases appears only secondary.

The law which has been framed in order to secure uniformity in the various states has the endorsement of the American Medical Association, of the American Public Health Association and of the Bureau of Vital Statistics at Washington, and should be enacted. The objection which is often made that an additional expense will be saddled upon the State, will not hold in our State, if the proposed change in the State Board of Health law becomes effective, namely; to have the Secretary of the Board act as the statistician for Missouri. With an office at Jefferson City, where it properly belongs, the clerical work of collecting vital statistics and the routine work of the State Board of Health could be done without greater expense than is now incurred by the State Board of Health alone. It has long appeared to many as not in conformity with the importance of the great health department of the State that its office should be peripatetic.

Another direction in which the usefulness of the State Board of Health should be extended is in supervising the sanitary affairs of the various eleemosynary and penal institutions of the State. To do this additions will be necessary to the existing laws, and we are informed

that amendments have been drawn whereby the State Board of Health will be given general advisory supervision over the institutions of the State.

We wish also to call the attention of our members to the amendment suggested by the committee on legislation whereby the State Board of Health will be empowered to subpoena witnesses and to require the production of books and papers.

The definition as to what constitutes the practice of medicine and also statutory provisions for defining who shall be considered a licentiate, are matters which will be called to the attention of the legislature.

It is one of the gratifying results of the organization of the physicians of Missouri that the most perfect harmony exists between the legislative committee and the State Board of Health which jointly will, no doubt, accomplish much during the coming session of the General Assembly.

It is of great importance that those county medical societies which have not as yet appointed a member of the legislative committee, do so at once in order that he may be called upon when necessary to present these matters in person to the member of the legislature from his county.

THE STATE SANATORIUM FOR INCIPIENT TUBERCULOSIS.

It is unfortunate that the State revenue is so limited this year when the Sanatorium at Mount Vernon needs so much. At the last session the champions of the institution accepted the challenge of the legislators which demanded that a good showing be made on the small amount of money appropriated; and we feel safe in saying that notwithstanding the limitations, the Sanatorium has returned to the State not in promise only all that could be accomplished, but in actual benefit already given, many times the money expended. When it is remembered that the Sanatorium has been open less than eighteen months, its record should stand as a monument of the achievement which can be accomplished through liberal appropriations. Summarizing what has been done we can say that sixty patients have been discharged with the disease arrested (it is too soon to demonstrate cures), seventy are now under treatment—nearly all of them doing well,—and there have been but four deaths, two of these being patients admitted for humanity's sake when far beyond the incipient stage. Fifty-nine patients have gained over ten pounds, others more than this, and one has gained forty-five pounds. While gain in weight is not a criterion of actual arrest of the disease, it is always a suggestive and encouraging sign of improvement.

The last Assembly gave but ten thousand dollars for maintenance. This was all too small; for the proper care of these cases, if they are to be restored to health, is bound to be a seemingly expensive undertaking. At one time the Board felt impelled to advise that the institution be closed because of actual bankruptcy, but rigid economy and sacrifice on the part of the officers and attendants averted this disaster to the State.

At present there are 70 patients in the Sanatorium, although the accommodations contemplated were for the care of only 48. The appropriation for the domestic building was held up because the State revenue was exhausted. The kitchen, dining-room, laundry and storeroom are all in one large shack, and this building is so inadequate for the uses to which it has been put that it has been on fire three times. Covered sewers extend only through a part of the grounds; there are no walks or finished roads; no well (the water for the whole plant is supplied through a two-inch pipe from the village).

The board of managers has asked for an appropriation to enable them to care for 200 patients. This means a large sum. It means four new pavillions and two infirmaries—each with a capacity for 25 patients or, including the two now furnished—room for 200; there must be that much room to enable the officers to do efficient work. It means also permanent buildings for the kitchen, the dining-room, the laundry, etc. It means more officers and more attendants; thus far Dr. Brown, with the able assistance of his wife and a few loyal helpers, has borne the whole burden.

It has been intimated that the estimated cost for the daily living of each patient is too high; experience and comparison with other similar institutions justifies the result. It costs $11 per week for each patient. This is about the most conservative estimate of any successful institution for this class of patients; and it has been demonstrated that any marked reduction in the expense of maintenance caused a corresponding loss in beneficial results. Incipient cases of tuberculosis cannot be cared for as cheaply as can almost any other class of cases, for in this instance it means restoration and cure at the expense of great care—the best food, and physical and mental rest. Eggs and milk are expensive items but absolutely necessary in the care of these patients.

The economic consideration of this subject at once prompts the question: What is the return to the State? Although even a superficial study of the results should carry the conviction that this institution ought to receive a liberal appropriation in order that the work in Missouri may continue to be commensurate with its importance to the citizens of the commonwealth, the following reasons will emphasize the necessity of appropriating adequate funds for the maintenance of the Sanatorium for the next two years:

1st. When 200 patients can be received and each kept for an average of six months, it means 800 for the two years of the appropriation. At least 600 of these can be returned to their homes as arrested or cured cases,—a moderate estimate that is in keeping with the experience elsewhere and not as high as the short history of the work at the Mount Vernon institution warrants. Multiply 600 by $5,000—the legal value of a life—and we have many times the cost of the whole plant returned to the State in two years.

2nd. This institution is demonstrating that a change in the manner of living and not change of climate, is necessary for the cure of tuberculosis. It is preaching the glad tidings that consumption is curable,—and curable at home. Estimate, if you can, the amount of money which is now being carried into other states and territories no better equipped than our own for the care of the consumptive, to say nothing of the hardships, the homesickness and the disappointment so often the sequence of the now antiquated idea of "a change of climate," and you have a reason cogent in all its bearings to give liberal support to this institution.

3rd. The annual debt paid by Missouri on account of tuberculosis, as estimated by comparison of population with those states whose laws place them in "the registration area," is not less than $22,000,000 and 6,000 lives at the average age of 35 years. In New York, Pennsylvania, England and Germany the burden has already been reduced one-half. The New York City Board of Health estimates that in the Borough of the Bronx the reduction of deaths since the crusade began was 70 per cent. Our State Sanatorium, by its force as an educator, is a powerful agent in this great work,—the most powerful of all agents.

Add these three items and then if it looks like a paying investment for Missouri, aid it by a personal letter or interview with your representatives. The work will be carried on but it is for the physician to see to what extent it shall be made a success.

THE MEDICAL INSPECTION OF SCHOOLS.

Every reform movement, to be a permanent up-lift, must strike deep into the roots of ignorance and wrong. What has been done cannot be undone. The man of to-day still suffers a hindrance to his progress because of the application of wrong methods in his development. It is the duty of the parent, the State and the nation, to search out and correct defects in the child, to the end that he may become as near perfect as human wisdom can make him.

As tending toward the consummation of this much to be desired object the medical inspection of schools exerts a greater influence than any other method that can be devised, and the commanding importance of this subject has of late years aroused educators, physicians and the public press to a realization of the rights of the child in the school-room. No longer do we see children driven to school like sheep to slaughter, to be birched by a domineering school-master or a neurotic schoolma'am for so-called indolence and laziness, and subsequently punished for the same weighty reason by ignorant parents. Backwardness and laziness, indifference and truancy, are too often the concomitants of physical and mental defects and perversions which can be, almost always, easily remedied by simple measures well known to medical science; and, be it said to the credit of the medical profession, to-day the value of this subject is receiving its proper recognition. Some seventeen years have passed since its importance was first asserted by a physician, Dr. Samuel H. Durgin, of Boston, and fifteen years since its adoption in that city,—the first city to inaugurate the system in this country; and though this might seem to argue against the progressiveness of the medical profession, let it be understood at once that it was the apathy of the public concerning the recommendations of the medical profession which delayed the general adoption of the system for so many years.

So apparent is the importance of this step not only as making for the better development of the faculties of the child,—a result that alone would repay all expenditure of time and money in its application—but also as an economic measure, that no dissenting voice has been raised to give pause to the movement, hence the argument of a protagonist is somewhat superfluous. Nevertheless, we cite two facts which speak loud for the adoption of the system,—to-wit, eighty per cent. of the school children in New York City were found defective; and Boston has not closed a single school on account of an epidemic of children's diseases since the beginning of medical inspection.

Following Boston's example New York City began the medical inspection of schools, and to-day the system is in vogue in 70 cities, outside of Massachusetts; in this State medical inspection is obligatory under the law and practically all cities have a system. Missouri's progress along this line, as in many other directions in which the medical profession should be among the leaders, has been very slow. Recently, however, Kansas City, with characteristic energy and directness of purpose in all questions pertaining to civic improvement, adopted a new charter which gives the health department wide latitude in controlling the health conditions of the city. Acting upon this authority the health commissioner has inaugurated a system of medical inspection of schools which,

though limited in its application by the lack of funds, promises to be an auspicious beginning in this cause in Missouri.

In striking contrast to the spirit of progress manifested by Kansas City, is the supine attitude of the citizens of St. Louis, where 150,000 school children are daily menaced by an outbreak of contagious diseases through lack of medical inspection; though the board of education, doubtless roused from its lethargy by the spirit of the times, has furnished emergency kits for the use of teachers in binding up cut fingers, skinned shins and bloody noses. The health commissioner has offered a number of ordinances for adoption by the municipal assembly providing for competent medical inspection of schools in St. Louis, but none has been accepted. Recently a new ordinance was introduced by the health commissioner which has the unanimous support of the daily press but, so far as we are aware, the medical profession as an organized body has not lent the weight of its approval. Such indifference is out of tune with the humanitarian spirit of the medical profession and ill becomes the scientific tendency of modern medicine as mirrored in the undeniable results achieved by a united profession.

THE PLAN FOR THE MEDICAL DEFENSE OF MEMBERS.

The plan of the State Association for defending its members in suits for malpractice seems to be not fully understood by all the members. For the guidance of those who desire to have the coöperation of the defense committee when sued or threatened with suit for malpractice, we publish full information concerning the steps necessary to be taken in order to obtain the assistance of the defense committee.

At the meeting in Springfield last May, a resolution was adopted setting aside $500 from the general fund to be used in defending members against suits for malpractice, and a committee was appointed, called the "Defense Committee," consisting of three members, whose duty it should be to prepare the defense of all members making application for its aid. In performing the duties assigned to it by this resolution, the defense committee has been guided by the propsed amendments to the by-laws, introduced by Dr. C. E. Fulton, though not formally adopted by the Association owing to the tentative nature of the defense feature. This amendment, which we print below, is comprehensive in its provisions and provides adequate defense, free of all cost to the members, to the conclusion of the trial. The amendment reads:

> The Defense Committee shall consist of three members, who shall, upon request and in compliance with the conditions hereinafter named, aid in the defense of suits for alleged malpractice instituted or threatened against any member of the Association. Conditions:

(a) Any member desiring to avail himself of the provisions of this section shall, so soon as possible, after any demand has been made upon him, present to the committee his request for aid in the defense together with a full and complete history of the case and the services therein rendered. The committee shall then, with the aid of its counsel, advise said member up to the time of the institution of suit without any expense to the member so charged. Should the member desire the committee's services subsequent to the institution of suit, he shall authorize the committee to further aid in the defense of said suit. The committee shall thereupon without expense to the member provide for all medical expert services necessary for the trial and the necessary legal services of its counsel; Provided, that the committee shall not obligate itself or the Association for the payment of any damages awarded in the trial or upon compromise.

(b) Such medico-legal aid or defense as is herein specified refers only to civil malpractice and is not to be construed to apply to criminal prosecutions.

(c) The committee with the approval of the House of Delegates shall have authority to employ counsel for the term of one year to advise as aforesaid and to represent any member of the Association in suits for alleged malpractice upon the terms hereinabove provided. The compensation of the attorney shall be determined by the committee with the approval of the House of Delegates.

Medical defense from malpractice suits is a membership feature of ten state associations and three county societies, and nine state associations have the plan under consideration. There can be no doubt of the value of this feature of membership in the state association and the experience of other state associations has abundantly proven its applicability. In New York the number of suits instituted decreased 25 per cent. after adoption of the plan and in no case was a verdict rendered against a member; in a relative measure, this is true also of all the other states that provide medical defense for their members.

If country members have solaced themselves with the thought that the city doctor is the shining mark against whom malpractice suits are most often directed and that the country doctor is rarely made a defendant, the experience of the Illinois association will shock his complacency. In that state the records show that the country practitioner is sued far more often than the city doctor and that the general practitioner in the country districts is the usual sufferer. We commend this thought to the secretaries of county societies for use in their arguments to induce new members to join the society,—for there are still some good men who need to be "shown." This ought to "sight" them.

EDITORIAL NOTES

At the Annual meeting of the Grand River Medical Society, held at Chillicothe, on December 9th, the Society was merged into and is to be known as the Grand River Medical Society of the Eleventh Judicial District. All the members in good standing of the Societies of Linn, Livingston, Carroll, and Chariton counties, numbering 105, were enrolled as members without payment of dues for this year.

The following officers were elected for the ensuing year: Dr. H. M. Grace, Chillicothe, president; Dr. J. W. Lane, Linneus, first vice-president; Dr. H. W. Tull, Carrollton, second vice-president; Dr. G. W. Hawkins, Triplett, third vice-president; Dr. R. Barney, Chillicothe, secretary; Dr. J. L. Burke, Laclede, treasurer; Dr. B. N. Stevens, Chillicothe, curator. The censors are, the secretaries of the four county societies comprising the Eleventh Judicial District.

The president and secretary were selected as a committee on constitution and by-laws, and are to report at the next annual meeting. The committee on program consists of the secretary and censors. The committee on arrangements is to be appointed by the president. The next annual meeting is to be held at Carrollton, in December, 1909.

Those present were very anxious and enthusiastic to get in line and coöperate with the State Association in any way for the betterment of the profession. It was a most harmonious and inspiring meeting.

The United States Civil Service Commission announces an examination on January 13, 1909, at the following named places, to secure eligibles from which to make certification to fill a vacancy in the position of medical interne (female), Government Hospital for the Insane, Washington, D. C., at $600 per annum with maintenance, and vacancies requiring similar qualifications as they may occur in that hospital: Columbia, Jefferson City, Kansas City, Kirksville, Springfield, St. Joseph, St. Louis, old custom house.

The Department states that it reserves the right to terminate the appointment at the expiration of one year of service if it is deemed advisable to do so.

Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., or to the secretary of the board of examiners at any place mentioned in the list for application Form 1312. No application will be accepted unless properly executed and filed with

the Commission at Washington. In applying for this examination the exact title as given in this announcement should be used in the application.

The following articles have been approved by the Council on Pharmacy and Chemistry:

Soloid Mercuric Potass. Iodide (Burroughs Wellcome & Co.).
Soloid Nizin (Burroughs Wellcome & Co.).
Tabloid Coffee Mint (Burroughs Wellcome & Co.).
Bismuth and Iron Citrate (Burroughs Wellcome & Co.).
Bismuthal (National Pharmacy Co.).

PERSONAL AND NEWS NOTES

Dr. F. A. Babler, of St. Louis, spent several weeks visiting in the clinics and hospitals in the East.

Personal.—Dr. R. L. Gleason has resigned from the staff of the City Hospital, St. Louis, to accept a government appointment in the Indian Service in Oklahoma.

Applicants Examined for License to Practice.—The State Board of Health examined 46 applicants for licenses to practice medicine in Missouri, on December 17th.

Missouri Valley Medical Society.—The next meeting will be held in St. Joseph, March 18 and 19. A committee from St. Joseph-Buchanan County Medical Society was appointed to arrange for entertaining the members.

The Visiting Staff of the General Hospital in Kansas City recently elected the following officers to direct the work of the staff: President, Dr. Jabez N. Jackson; vice-presidents, Drs. J. D. Griffith and C. Lester Hall; secretary, Dr. J. Park Neal.

Dr. Frederic Brush, of Boston, has been appointed Superintendent of the New York Post-Graduate Medical School and Hospital. Before assuming the position he will devote some time to a study of post-graduate instruction and hospital administration in the various American medical centers.

Eye, Ear, Nose and Throat Section.—Jackson County Medical Society has authorized the formation of a section on diseases of the eye, ear, nose and throat. Dr. D. L. Shumate was elected chairman pro tem. and Dr. J. S. Wever, secretary pro tem. Meetings will be held monthly.

In Practice for Fifty Years.—Dr. E. C. Davis, of Hunnewell, and Dr. A. G. Wood, of Lentner (Shelby County), were the guests of honor at a banquet following a meeting of Shelby County Medical Society, December 19th, in celebration of their having passed the half century mark in continuous practice.

Ten Thousand Dollars will be given to Mercy Hospital in Kansas City at an early date. Mr. J. W. Semple, of Cripple Creek, Colo., promised $1,000 if the hospital would raise $9,000. The condition has been fulfilled through the generosity of Mr. J. L. Loose, president of the Boston Cracker Company, but a resident of Kansas City, who recently sent a check to the hospital for $1,000.

The Southern Surgical and Gynecological Association closed a highly interesting meeting in St. Louis on December 17th after having been in session for three days. About 200 members attended the meeting and some 40 papers were read and discussed. The next meeting will be held at Hot Springs, Va. Dr. Stuart McGuire, of Richmond, Va., was elected president and Dr. John Young Brown, of St. Louis, was elected one of the vice-presidents. Dr. W. D. Haggard, of Nashville, Tenn., was re-elected secretary.

An Effort is Being Made in St. Joseph to restrict the sale of pure carbolic acid by druggists. At the request of the Retail Druggists' Association of St. Joseph, the local board of health will petition the council to pass an ordinance requiring that all carbolic acid sold without a physician's prescription be diluted 50 per cent., and that pure carbolic acid be sold only on the written prescription of a physician. The druggists feel that such an ordinance will have a tendency to prevent many suicides and would relieve them of responsibility when making sales of poisons.

A. P. Miller, of Kansas City, was indicted by the federal grand jury for using the mails to advertise improper medical remedies. Miller has been arrested four times in the past three years for similar offenses. His first offense occurred in Chicago, for which he was arrested, but no sentence was passed upon him. Some months later he was arrested

in Kansas City and served a jail sentence of six months; again, early in this year, he was indicted and this charge was pending against him when the last indictment, issued November 7th, was found.

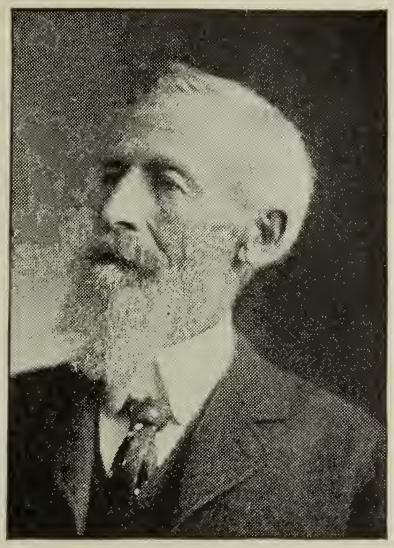
Arrested for Practicing Without a License.—Philip Kane, of St. Louis, was arrested on the charge of holding himself out as a physician without license to practice medicine. Kane advertised himself as an oculist. A special officer from the Health Department consulted the so-called oculist and was told to deposit $1,000 in the bank and sign a contract agreeing to turn over this money to Kane when cured. The officer's eyes were perfectly normal. Kane is 59 years old and married.

Montgomery County Medical Society was reorganized on December 17th with the following officers elected for 1909: President, Dr. S. S. Cox, Wellsville; secretary, Dr. W. M. Wheeler, High Hill; treasurer, Dr. G. E. Muns, Montgomery; delegate, Dr. S. S. Nowlin, Montgomery.

Dr. A. R. McComas, Councilor for the 9th District, and Dr. A. R. Kieffer, President of the State Association, were present at the meeting and addressed the members. With the affiliation of Montgomery County Medical Society the 9th District is now solidly organized and all the counties affiliated with the State Association. There remain only nine counties in the State that have not been organized and most of these are in sparsely settled districts.

Dr. Christian B. Stemen, of Kansas City, Kans., celebrated the golden anniversary of his wedding on November 7th. Dr. Stemen is 73 and his wife is 65. They have resided in Kansas City during the past three years. For thirty years Dr. Stemen was chief surgeon of the Pennsylvania Railway and at different times filled the chair of professor of surgery in the Fort Wayne Medical and Surgical College and in the Ohio Medical College at Cincinnati. Following the death of the late Benjamin Harrison, Dr. Stemen was appointed regent to Purdue University at Lafayette, Ind. Of the seven children born to Dr. and Mrs. Stemen, five are physicians. There are: Dr. George Stemen of Denver, secretary of the Colorado state board of health; Dr. Charles M. Stemen of Kansas City, Kas.; Dr. Katherine Stemen Hughes, wife of Dr. P. D. Hughes of Kansas City, Kas.; Dr. Will E. Stemen of Denver; Dr. Harriett Stemen-Macbeth of Fort Wayne.

OBITUARY



CAT.

JAMES TATE ALLEN, M. D.

Dr. James Tate Allen, one of the earliest settlers of Daviess County, and one of the oldest practitioners of medicine in the State, died at his home in Gallatin on November 13th, 1908. Dr. Allen was born in Batetourt County, Virginia, July 16th, 1833. He received his early education in the schools of his native town and later studied at Princeton. At the age of 18 he began the study of medicine and attended several courses of lectures in Richmond, Virginia. In 1855 he came to Missouri and graduated from the McDowell Medical College in St. Louis. He first began to practice his profession at Auberry Grove. In 1857 he laid out the town of Jamesport, Daviess County, with the assistance of Mr. James Gillilan. At the commencement of the Civil War, he enlisted in the Confederate Army and served four years as surgeon. At the end of this time he returned home and took up the practice of his profession, continuing in his labors until the time of his death. In 1871 he opened the first drug store in Jamesport, but three years later disposed of all his interests in that city and moved to Gallatin. During the latter years of his life he gradually permitted himself to indulge in the rest from active labors which his previous years of service entitled him to enjoy, and while he did not discontinue his labors entirely, he confined his work mostly to consultations and office practice.

Dr. Allen was a cultured gentleman of the old school, whose life will always be regarded by those who knew him as an example worthy of emulation. He was, as a true physician must always be, unselfish in his efforts to relieve sickness and suffering, and gave freely of his time and substance toward the alleviation of the ills of frail humanity. In his death the community has suffered the loss of a patriotic citizen and the medical profession one of its honored and devoted followers.

COUNTY SOCIETY NOTES

BENTON COUNTY MEDICAL SOCIETY.

The Benton County Medical Society met at Warsaw, December 2nd. Election of officers for the ensuing year resulted in the following: President, H. G. Savage, Warsaw; secretary-treasurer, Marion Dillon, Fairfield; delegate to the Missouri State Association, Dr. A. C. Curl, Crosstimbers; censors, Dr. W. G. Jones, Lincoln; Dr. E. E. Rhodes, Lincoln; Dr. R. L. Pomroy, Warsaw.

The Society resolved to do what it could toward the advancement of the work of the State Sanatorium for Tuberculosis, at Mount Vernon, and to urge our representative and senator to vote for any bill having for its aim the advancement of medical education, that might come up during the meeting of the next general assembly.

A great deal of unfinised business from our last meeting was attended to, after which we adjourned to meet in Warsaw during the month of April. It was decided to hold a banquet at our next meeting.—MARION DILLON, M. D., Secretary.

BOONE COUNTY MEDICAL SOCIETY.

The regular meeting of the Boone County Medical Society was held in Columbia, December 7th. The attendance was unusually good. There were present twelve members and three visitors.

Dr. O. W. H. Mitchell read a paper on "Early Involvement of Cervical Lymph Glands in Carcinoma of the Oesophagus," with a report of cases.

Dr. B. R. Gibson gave a review of his work on the concentration of diphtheria antitoxin, while he was connected with the board of health of New York City in 1904 and 1905. Both papers were freely discussed.

The following officers were elected for 1909: President, C. W. Austin; vice-president, R. R. Robinson; secretary and treasurer, A. W. Kampschmidt; delegate, J. E. Thornton.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The Cape Girardeau County Medical Society held its regular monthly meeting at Cape Girardeau, December 4th, with the following members present: Drs. Dalton, Hays, Henderson, Hope, Howard, Porterfield, Jr., Schulz, Walker, Wichterich, Wilson and Yount; visitor: Dr. Ed. Moore.

The secretary made his annual report as to the work done during the year which was received. The treasurer made a report of the financial condition of the Society.

Dr. Elwood Moore, formerly of Stoddard County, was elected a member of the Society.

Election of officers for the year resulted as follows: President, Dr. R. T. Henderson, of Jackson; vice-president, Dr. J. D. Porterfield, Jr., of Cape Girardeau; secretary, Dr. E. H. G. Wilson, of Cape Girardeau; treasurer, Dr. B. W. Hays, of Jackson; censor, Dr. G. W. Vinyard, of Jackson; delegate to State Association, Dr. W. K. Statler, Oak Ridge.

The Society meets the second Monday in the month. Next place of meeting will be Jackson.—E. H. G. Wilson, M. D., Secretary.

CARROLL COUNTY MEDICAL SOCIETY.

The Carroll County Medical Society met in regular session at Carrollton, Wednesday, December 9th, 1908.

Members present, Drs. Baird, Cooper, Mussen, McGinnis, Samuels, Boggs and Miller.

Dr. B. J. Lee, who was appointed to prepare a paper on pneumonia, being absent, Dr. Mussen lead a very interesting discussion of the subject, directing his remarks chiefly to the pneumonia of children. His discussion brought out many points of interest. Drs. Samuels, McGinnis and Boggs discussed the different phases of the disease, and reported several cases, which were beneficial and interesting to the Society.

Election of officers resulted as follows: President, Dr. W. C. Baird; vice-president, Dr. Cooper; secretary-treasurer, Dr. R. F. Cook; reporter, R. M. Miller.

A few brief remarks were made by the president, urging members to attend more regularly and to endeavor to make this the best county society.

Meeting adjourned until the second Wednesday in January, 1909.—R. M. Miller, M. D., Reporter.

CHARITON COUNTY MEDICAL SOCIETY.

The Chariton County Medical Society convened in regular session at Brunswick, on December 10th. Nine members were present. Dr. J. S. Wallace, second vice-president, presided as chairman.

The following officers were elected for the year 1909: President, G. W. Hawkins, Triplett; first vice-president, G. W. Edwards, Brunswick; second vice-president, B. Hughes, Keytesville; secretary, C. A. Jennings, Salisbury; reporter, C. A. Jennings; delegate to State Association, G. W. Hawkins; alternate, A. W. Zilman; representative to Surgical Section, J. S. Wallace; representative to Medical Section, J. H. P. Baker.

Dr. J. D. Brummall, Councilor for the 11th district, reported that the Grand River Medical Society, on December 9th, 1908, was merged into the Grand River Medical Society of the Eleventh District, and that all members in good standing in the county societies of the 11th district were enrolled as members, without the payment of dues for one year.

Dr. Kirkpatrick, of Dalton, read an excellent paper, entitled, "On the Credulity of the Lay Mind as an Asset for Quackery." This paper was generally endorsed by the members, with a request that it be submitted for publication in the Journal.

Dr. Wallace read a paper on "Otitis Media Purulenta," which was instructive and well received, but owing to the lateness of the hour the discussion was postponed until our next meeting.

Our Society is in a flourishing condition; our roster for 1908 showed 29 members. Every eligible physician in the county, with two or three exceptions, is enrolled.—C. A. JENNINGS, M. D., Reporter.

CLAY COUNTY MEDICAL SOCIETY.

The Clay County Medical Society met in regular monthly session at the office of the secretary in Liberty, on Monday, December 28th.

Following an interesting program, the following officers were elected for the year 1909: Dr. J. T. Rice, Excelsior Springs, president; Dr. W. W. Goodson, Liberty, vice-president; Dr. T. H. Matthews, Liberty, secretary-treasurer; Dr. C. H. Suddarth, Smithville, delegate; Dr. F. H. Matthews, alternate to State Association meeting.—F. H. MATTHEWS, M. D., Secretary.

COOPER COUNTY MEDICAL SOCIETY.

The Cooper County Medical Society met in Boonville on Tuesday, December 1st, 1908. Members present: Drs. A. E. Monroe, H. V. Cordry, R. L. Evans, A. L. Meredith and J. R. Lionberger.

After presentation and discussion of clinical cases the Society proceeded to the election of officers for the ensuing year, with the following result: President, J. S. Parrish, Pleasant Green; vice-president, A. E. Monroe, Otterville; secretary-treasurer, John R. Lionberger, Boonville; delegate to State Association, H. V. Cordy, Boonville; censor for three years, H. V. Cordry, Boonville. The Society then adjourned to meet Tuesday, January 4th, 1909, and continue the discussion of disease of the respiratory tract.—JNO. R. LIONBERGER, M. D., Secretary.

GREENE COUNTY MEDICAL SOCIETY.

MEETING OF OCTOBER 23RD.

Dr. J. R. Boyd presented a paper on "Diagnosis and Treatment of Gastric Ulcers."

MEETING OF NOVEMBER 13TH.

Dr. J. E. Tefft presented a paper on "Diagnosis of Abdominal Tumors." Dr. C. C. Hankins, of Springfield, was elected to membership in the Society.

MEETING OF NOVEMBER 20TH.

Dr. J. R. Boyd presented a paper on "Physical Diagnosis of Diseases of the Lungs and Pleura."

MEETING OF NOVEMBER 27TH.

The Society changed its annual meeting and election of officers to the first regular meeting in December of each year.

Dr. C. A. Moore read a very interesting paper on "Hypertrophy of Tonsils and Adenoids." He said in part: "This subject has but recently been given the attention that it deserves. The lymphoid ring that surrounds the oro-pharyngeal orifice contains four tonsils which should be studied as a whole; an enlarged pharyngeal tonsil may obstruct the passage of air to the lungs thereby interfering with proper nutrition and the hypertrophy may extend through the Eustachian tube into the

ear thus causing more trouble; the conditions produced by hypertrophied faucial tonsils are of the most importance; cold used to be thought the exciting cause, the belief that the tonsils act more as a means of introducing infection into the system, than as a means of destroying germs by the action of the leucocytes, as was taught in our physiology, seems much more reasonable than the old theory; in his practice he had never seen a case of follicular pharyngitis that did not also present a tonsil more or less enlarged. In the treatment, syr. ferri iodide can be used with good results; thoroughness is of much importance and a gargle or swab will not clean out the crypts; phenol and glycerine may be used as a local application though the actual cautery applied well down to the bottom of the crypts may possibly be the best local application; as to the operations the method that proves the most satisfactory to the operator is the proper one to do."

The paper was discussed by Drs. Farnsworth, Dewey, Woody and Coffelt.

MEETING OF DECEMBER 4TH.

Dr. N. F. Terry presented a paper on "Appendicitis, Medical and Surgical."

ANNUAL MEETING OF DECEMBER 11TH.

All committees reported progress in their work during the year 1908. The secretary reports 60 members in good standing, 29 meetings and 150 contributions to the program. The treasurer reported all bills paid and some cash on hand.

Resolutions were passed urging the establishing of a National National Bureau of Health.

Election of officers for 1909: Dr. F. B. Fuson, president; Dr. C. E. Woody, vice-president; Dr. D. B. Farnsworth, treasurer; Dr. J. E. Dewey, secretary; Dr. N. F. Terry, censor; Dr. W. M. Smith, delegate; Dr. J. R. Boyd, alternate delegate. Next meeting and banquet January 8th, 1909.—J. L. ORMSBEE, M. D., Secretary, 1908.

HENRY COUNTY MEDICAL SOCIETY.

The Henry County Medical Society met in the court house at Clinton on Wednesday, December 9th. Fourteen members were present.

Dr. R. D. Haire read a paper on "Tuberculosis," that showed care, thought and research in its make-up and was well received. It was discussed by Drs. Beaty, Gibbins, Poaque, McNeis, Derwent and Peelor, and Dr. Haire in closing.

Dr. Derwent read a good paper on "Diseases of the Middle Ear," giving causes and treatment. Discussed by Drs. Gibbins, Gray and Shankland.

The secretary read communications from the secretaries of the State Society and board of health, which caused a discussion by Drs. Britts, Barr and Grady, and upon motion the suggestion that the Society add influence to the movement was carried unanimously.

The election of officers resulted in the selection of W. H. Gibbins, president; E. C. Peelor, vice-president; F. M. Douglass, secretary-treasurer; L. C. Grady, delegate to the State Association; J. R. Hampton, alternate; Wm. M. Shankland, censor for three years.—F. M. DOUGLASS, M. D., Reporter.

HOWARD COUNTY MEDICAL SOCIETY.

The Howard County Medical Society met at Fayette, December 4th. Present: Drs. Lewis, Wright, Bonham, Fleet and Watts.

The Society requested the secretary to return our thanks to Gov. Folk for his recent act of justice in pardoning Dr. J. D. Todd, and to request him, in justice to Dr. Todd, to restore him to full citizenship.

The program committee appointed Drs. J. B. Fleet and Bonham to prepare papers for the January meeting, on subjects of their own selection.

A letter from the state secretary was read and our Councilor was requested to visit us early in 1909.—C. W. Watts, M. D., Reporter.

HOWELL COUNTY MEDICAL SOCIETY.

The Howell County Medical Society met at West Plains, Thursday, December 3rd.

Dr. H. J. Rowe, of Willow Springs, read a very interesting paper, "The Regular Profession and the Isms," which dealt with the fads and fancies of folks which the regular physician must meet and deal with, and gave some good suggestions as to the best way to meet them. The paper was discussed at length and by a vote of the Society, the doctor was requested to give the paper to the secretary to transmit to the Journal with the request that it be published.

Dr. R. S. Spears read a paper, "Typhoid Fever and Its Sequellæ," which dealt with the subject in a thorough and scientific manner, and was generally discussed.

After the scientific program was disposed of, the following officers were elected for 1909: President, D. J. Nichols; vice-president, James Black; secretary, A. H. Thornburgh; treasurer, E. E. Evans.

The physicians of the city entertained the visiting members at a noon-day banquet which was greatly enjoyed by all present.

The Society holds its next meeting, Thursday, February 4th, at West Plains.—A. H. Thornburgh, M. D., Secretary.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY.

The Lawrence-Stone County Medical Society was called to order by the president at Aurora, December 1st. The attendance was small but there was no lack of interest. There has rarely been a meeting of the Society since its organization three years ago, when, regardless of the number in attendance, there were not timely papers read and the liveliest sort of discussions had.

After some routine work, the scientific program was opened by the reading of a paper on Medical Economics entitled "The State's Duty to the Physician," by Dr. Madry. The paper shows the practice of inequalities by the State which prevents the rise of the profession to its right economic balance; shows that the State in levying restrictions and making exactions of her physicians is ignoring the natural law of compensation and that both State and profession are badly crippled in consequence. The author said that compensation should measure the complement of every angle or arc where the State has let full requirement as its sine. The profession is suffering from economic evils that cannot be remedied by the application of purely educational or ethical remedies,

and the State from losses due to ignoring sanitary science and failure to pass compensatory laws for the benefit of her physicians.

Drs. Harris, Andrews and Fleming took part in the discussion of the paper, developing the facts that a very large part of the labor of medical men is devoted to charity, part of which should be borne by the State; that ridding the county of preventable diseases must be the duty of the State and nation; that failure to favor or give right sustenance to the profession is to practice and encourage waste and that these are economic evils that can not be corrected by the application of any educational remedies. Revs. H. H. Burch and T. C. Walker, who were in attendance, discussed the paper from the standpoint of laymen, developing the idea that all intended legislation should show that selfish ends were not sought by the profession but that the design was for the ultimate good of all.

The election of officers for the ensuing year resulted as follows: A. H. Madry, Aurora, president; J. P. Andrews, Marionville, vice-president; J. B. Fleming, Aurora, secretary; T. D. Miller, Aurora, treasurer; J. A. Harris, Mt. Vernon, reporter; W. S. Loveland, Verona, censor. D. M. Huffman, F. S. Stevenson and W. W. Rodman were appointed Committee on Public Health and Legislation.

Dr. Loveland reopened the scientific program with a paper on "Hernia" and presented a clinic. The paper and clinic each received due attention. Dr. N. F. Terry, of Springfield, opened the discussion and stated that it was with great danger to the patient and discredit to the physician that so large a per cent. of this practice was allowed to drift to the charlatan and the druggist. There was no definite time at which strangulation would take place; improvement in technique of operation for radical cure had advanced until now it was regarded as a very safe operation if performed within a reasonable time. For the purpose of disinfecting parts he was favorable to Harrington's solution.

Dr. Harris called attention to the appalling prevalence of hernia and stated that the operation as done by the skillful hand like Dr. DeGarmo's was, upon close inspection, not so easy as it appeared. Dr. Andrews opposed the theory of Dr. Loveland that all cases were acquired with an authority that all cases were congenital. The injection method of cure was mentioned, as having brought some unpleasant experience and this method condemned.

Dr. Huffman reported Dr. Goodrich's case of diphtheria. This was, for thirty-six hours, a mild case and at that time took on alarming symptoms. Antitoxin had not been given until this time. Several doses were then given, each of which seemed to produce good results but unfortunately the supply ran out and the patient died. Dr. Andrews opened the discussion reporting a case in which he had recently given a sum total of fifty-seven thousand units but with happy results. Drs. Madry, Shelton, Terry, Fleming and Moore took part in the further discussion developing the fact that, while the serum continued to be effective, the results, even of the doses of highest potency, were not as gratifying as those of less power formerly appeared to have been. The establishment of an antitoxin farm at Columbia was suggested as a plan to keep up the efficiency and reduce the cost of the remedy to the people.

Dr. Harris presented a resolution looking to the support of the Sanatorium at Mt. Vernon and increasing the sphere of its usefulness.

The Committee on Public Health and Legislation was ordered to draw up resolutions favoring the merging of all national bureaus performing health functions and reported as follows:

"Whereas, we believe that the conservation of the lives, of the health, the happinness and the material wealth of the people is a matter of prime importance in state-craft, and recognizing the need of a more thorough and effective organization of the existing medical forces to further this end, therefore,

Be it resolved; That the Lawrence-Stone County Medical Society declare ourselves in favor of the merging of all the National bureaus performing public health functions into one Department of Public Health. Be it further

Resolved that we notify our United States Senators from Missouri and the Representatives of the 14th and 15th congressional districts of this action and respectively invoke their valuable assistance and support in bringing about the desired concentration."

Other valuable papers could not be read and discussed on account of lateness of the hour and the Society adjourned.—A. H. Madry, M. D., Reporter.

LEWIS COUNTY MEDICAL SOCIETY.

Lewis County Medical Society met in regular session at Quincy, Ill., November 19. While the attendance was not large, yet a very interesting program was rendered.

The following members were present and took an active part in the work: Dr. R. E. Wilson, Dr. H. E. Dunlop, Dr. C. N. Frame, Dr. Wm. L. Ellery, Dr. Junius Tompkins, Dr. J. C. Brown, Dr. Paul F. Cole.

Items of special interest on the program, were two papers, one by Dr. Wilson, "The Differential Diagnosis of Smallpox." Dr. Wilson is our highly esteemed county physician, and his wide experience with this disease in various parts of the county made his paper of special interest to all. The other a paper, "The Use of Forceps as an Aid to Labor," by Dr. Tompkins, of Canton. Dr. Tompkins is the oldest active practitioner in Lewis county, having been in active practice here for more than fifty years. His paper was very instructive and we regret very much that there were not more of the members present to hear it.

Many other important topics were brought up for discussion, all members present taking an active part with the work.

The following officers were elected for 1909: Dr. Junius Tompkins, Canton, Mo., president; Dr. C. N. Frame, Ewing, Mo., vice-president; Dr. Paul F. Cole, Steffenville, Mo., secretary.

During the meeting Dr. H. E. Dunlop read the following:

BIOGRAPHICAL SKETCH OF DOCTOR JUNIUS TOMPKINS.

Among the old active practitioners of the State, Dr. Junius Tompkins, of Canton, is perhaps preëminent as having practiced continuously in one place since graduation in 1855.

Doctor Tompkins was born in Albemarle county, Virginia, October 20th, 1833. Moving to St. Louis, which at that time was considered very far west, he studied medicine at the old McDowell College, which later became the Medical Department of the University of Missouri. The late lamented Dr. Jno. T. Hodgen was Dr. Tompkins' room-mate and a student at the same school. During his student days he suffered from a severe attack of smallpox. Dr. Tompkins' life is remarkable, too, in that he had absolutely no vacation during fifty years of his practice. His visit to the St. Louis World's Fair was his first outing since locating

in Canton in 1855. The Doctor has been married twice. No man in the community is more thoroughly respected or loved. At 75 he enjoys the confidence of the people as a gentleman and physician, as shown by his position as president of the First National Bank and his large professional clientele. The Doctor is still rugged and enjoys nothing better than a professional call on horseback to some old-time patient. In him is represented a gentleman of the old school and a physician who reminds one of Ian MacLaren's celebrated creation—Dr. William MacLure.

H. E. Dunlop, M. D.

Canton, Mo.

The next regular meeting to be held in Quincy, Ill., February 1st, 1909.—Paul F. Cole, M. D., Secretary.

LINN COUNTY MEDICAL SOCIETY.

The Linn County Medical Society held its annual meeting in Laclede, December 8th.

The following resolution was adopted, amending the constitution: "The Linn County Medical Society shall meet quarterly at such times and places as the Society may select." On motion it was decided that the meetings shall be held in February, May, August and November, on the Tuesday nearest the full of the moon.

The following officers were elected for 1909: President, Dr. D. F. Howard, Brookfield; first vice-president, Dr. R. H. Morris, Linneus; second vice-president, Dr. H. C. Johnson, Meadville; secretary, F. W. Burke, Laclede.

The sceintific program consisted of the following papers:

"Early Diagnosis of Tuberculosis," by Ray W. Whaley, of Browning. The paper was discussed by Drs. Z. T. Standly, Robert Haley and Whaley, in closing.

"Empyema," by Dr. T. P. Oven, of Brookfield. Discussion by Drs. Z. T. Standly, F. W. Burke and Robert Haley; closed by Dr. Oven.

The Society adjourned to meet in Brookfield, February 2, 1909.—F. W. Burke, M. D., Secretary.

MONITEAU COUNTY MEDICAL SOCIETY.

The Moniteau County Medical Society held its regular quarterly meeting at California December 10th. A paper on the subject of "Unscientific Prescribing" aroused an interesting discussion in which each member present participated. There was a unanimous sentiment that it is not ethical nor commendable for the profession to prescribe specialties and proprietary preparations, nor to depend on the specialty man for a knowledge of therapeutics. The best interest of the doctor and his clientele is conserved in prescribing Pharmacopeial and National Formulary preparations.

The election of officers was held and resulted as follows: President, Dr. W. R. Patterson; vice-president, Dr. J. H. Lang; secretary, Dr. H. C. Freudenberger; treasurer, Dr. H. C. Kleuber; censor, Dr. L. L. Latham; delegate, Dr. H. C. Freudenberger; alternate, Dr. J. A. Crum. Dr. W. R. Patterson was elected to represent the Society on

program at State Association. The next meeting will be held at California March 11th, 1909.—W. R. Patterson, M. D., Reporter.

STE. GENEVIEVE COUNTY MEDICAL SOCIETY.

The Ste. Genevieve County Medical Society held its regular annual meeting December 9th, 1908.

Officers to serve for the ensuing year were elected as follows: F. E. Hinch, president; J. A. Wilkins, vice-president; R. W. Lanning, secretary-treasurer. Dr. R. W. Lanning was elected a member of the board of censors to serve for three years. Drs. Chas. J. Hertich, G. M. Rutledge and W. W. Jarvis were appointed committee on public health and legislation. Dr. J. A. Wilkins, St. Mary, was appointed delegate to serve for two years. No further business appearing, the Society adjourned until the second Wednesday in January.—R. W. Lanning, M. D., Secretary.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

At the annual meeting of the St. Joseph-Buchanan County Medical Society, Wednesday evening, December 9, the following officers were elected for the ensuing year: President, Dr. John M. Doyle; first vice-president, Dr. J. W. Ferguson; second vice-president, Dr. John I. Byrne; secretary, Dr. Chas. Wood Fassett; treasurer, Dr. J. M. Bell; censor, Dr. W. B. Deffenbaugh; delegate, Dr. C. A. Good; alternate, Dr. E. S. Ballard.

The annual banquet at the new Robidoux Hotel proved a very happy event, and was much enjoyed by the sixty-five members in attendance. Dr. H. S. Forgrave, the retiring president, acted as toastmaster, and Dr. C. B. Hardin, of Kansas City, president of the Medical Society of the Missouri Valley, was the guest of honor. The following responded to toasts: "The Doctor a Man of Destiny," Mayor A. P. Clayton; "Hygiene of To-Day," Dr. E. A. Donelan; "Immunity," Dr. C. B. Hardin; "Needs of Our Profession," Dr. Daniel Morton; "Vivisection," Dr. O. B. Campbell; "Professional 'Hobbylogue,'" Dr. A. L. Gray.

An excellent musical program was rendered during the evening, including vocal and violin solos.—Chas. Wood Fassett, M. D., Secretary.

SHELBY COUNTY MEDICAL SOCIETY.

The Shelby County Medical Society met in regular session Saturday, December 19th, in Shelbina.

The following officers were elected for 1909: President, H. M. Pollard; vice-president, W. C. Vaughn; secretary-treasurer, A. M. Wood; delegate, Wm. Bayliss.

Dr. Singleton read a paper on "Anesthetics," which was fully discussed, with profit to all.

The regular meeting being finished, the Society repaired to the dining-room in the Waverly Hotel, where a banquet was given in honor of Dr. E. C. Davis, of Hunnewell, and Dr. A. G. Wood, of Lentner, both of whom have passed the half century mark in the practice of medicine

in this county, and have been an honor to the profession and respected and esteemed by the public in general.

Following is program of the banquet: Introduction and welcome, by Dr. H. M. Pollard, president and toastmaster; "The Doctor as a Friend," by Dr. J. D. Smith; "The Doctor as a Gentleman," by Dr. W. C. Vaughn; "Glance at Fifty Years of Medical Progress," by Dr. Wm. Bayliss; "The Doctor as a Citizen," by Dr. Wm. Carson; "Our Guests," by L. W. Dallas; Responses by Guests,—Drs. E. C. Davis and A. G. Wood; "The Doctor as a Politician," by Dr. W. W. Owen; "The Medical Profession of Shelby County," by Dr. A. M. Wood.

This was surely a good meeting, the best of fellow-feeling prevailing. Those present were: Drs. Christie, Howell, McNutt, Pollard, J. D. Smith, Chapman, Vaughn, Singleton, Dallas, Furnish, Roy, Daniel, Sanders, Bayliss, L. L. Smith, Wood Davis, Nickell.—A. W. Wood, M. D., Secretary.

ST. LOUIS MEDICAL SOCIETY.

At the stated meeting of the General Society, December 5th, the following papers were scheduled for presentation: 1. Recent Experiences in the Treatment of Uterine Cancer, by Fred J. Taussig, M. D. 2. Secondary Cancer of the Lung, by Louis M. Warfield, M. D. The program for the meeting of December 19th was as follows: 1. A Study of the Anatomic Relation of the Optic Nerve to the Accessory Cavities of the Nose (with exhibition of horizontal sections of fifteen heads, with drawings and reconstruction showing the anatomic relation of the optic nerve to the accessory cavities of the nose), by Hanau W. Loeb, M. D. 2. The Surgical Relief of Athetosis and Spasticities; a Preliminary Report of Three Cases, by Nathaniel Allison, M. D., and Sidney I. Schwab, M. D.

Sectional meetings of the Society during December and the programs arranged for discussion were as follows:

Ophthalmic Section.

December 9th.

1. Unannounced Specimens, and Presentation of Patients. 2. (a) Retinitis Punctata.—Presentation of Patient; (b) Use of Cycloplegics in Refraction, by F. E. Woodruff, M. D. 3. "A New Treatment for Ulcers of the Cornea," by E. H. Higbee, M. D.

Section on Urology.

December 15th.

1. Auto-infection from Gonorrheal Para-urethritis, by Jas. L. Boehm, M. D. 2. Tuberculosis of the Bladder, by Bransford Lewis, M. D.

Oto-Laryngological Section.

December 23d.

1. Acute and Chronic Inflammation of the Eustachian Tube, and the Method of Treatment for Relief of Same, by W. B. Shields, M. D. 2.

Report of a Case of Epithelioma of the Auricle, External Auditory Canal, and the Tympanic Cavity; Presentation of Specimens, by Carl Barck, M. D.

At the annual meeting, Saturday, December 26th, the officers were elected for the year 1909 as follows: President, C. M. Nicholson; secretary, Carroll Smith; members of the Council, George Homan, C. E. Burford, R. M. Funkhouser, H. C. Dalton; delegates to State Association, W. W. Graves, J. H. Amerland, John C. Morfit, Geo. Homan, T. A. Hopkins, H. L. Nietert, G. C. Crandall, V. P. Blair; alternates, P. Y. Tupper, Walter Baumgarten, W. C. G. Kirchner, M. B. Clopton, W. E. Sauer, F. J. Taussig, H. W. Soper, Jesse S. Myer.

The proposition to increase the yearly dues to $10.00 was defeated, 261 to 163.

BOOK REVIEWS

The Ready-Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M. D., Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. Sixth Edition, 12mo., 737 pages, with 99 engravings and 4 plates, in colors, and monochrome. Cloth, $3.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

Many books on diseases of the skin are vague, prolix and unsatisfactory. This work, however, is clear, concise and vigorous and will prove of great value, not only to students of medicine, but to the general practitioner also. Sometimes a little more might be desired under the head of diagnosis. The type and paper are excellent and the illustrations exceptionally good.

Medical Record Visiting List for 1909. New Revised Edition. New York. William Wood & Co.

This edition of the Medical Record Visiting List has been revised and enlarged, and contains an increased amount of matter intended to be useful in emergencies, and such as might be better referred to the physician's library has been eliminated. The most important change is in the list of remedies and their maximum doses in both apothecaries' and decimal systems, and the indication of such as are official in the United States.

Anatomy, Descriptive and Surgical. By Henry Gray, F. R. S., late lecturer on Anatomy at St. George's Hospital, London. New American edition, enlarged and thoroughly revised, by J. Chalmers Da Costa, M. D., Professor of Surgery and Clinical Surgery, and Edward Anthony Spitzka, M. D., Professor of Anatomy, in the Jefferson Medical College of Philadelphia. Imperial octavo, 1625 pages, with 1149 large and elaborate engravings. Price, with illustrations in colors, cloth, $6.00, net; leather, $7.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

This edition of Gray is handsomely bound and illustrated with 1149 engravings. It is fully up to the position its previous editions have held among text books of anatomy.

Practical Points in Anæsthesia. By Frederick-Emil Neef, B. S., B. L., M. L., M. D., New York. Surgery Publishing Co., 92 William street.

This work of less than fifty pages deals with the use of chloroform, ether and anaesthol. A considerable number of practical points are discussed and by side annotations in the text, the subject matter is rendered easy of reference. In its limited scope the work is an extremely practical and useful one.

International Clinics. Vol. III. Eighteenth Series. 1908. J. P. Lippincott Co. Philadelphia and London.

Perforation of the Intestine in Typhoid Fever. By J. A. Scott, of Philadelphia.

The Pennsylvania hospital is situated in a slum district of Philadelphia, is rich in "dirt disease" of which typhoid is the chief, and is also rich in possessing a staff of physicians and surgeons who work together in perfect unity and with great enthusiasm.

Whenever any *suspicion* of perforation arises a surgeon is called in consultation. "Frequent consultations have been of mutual advantage and have in recent years considerably reduced the percentage of error in the diagnosis."

Being a member of the staff in such an institution makes Scott a real authority on the subject he discusses. His paper is of great value and is worth more than the cost of the volume in which it appears. One in four of the cases submitted to operation recover. After operation Scott distinctly opposes the Fowler position being used in the very toxic cases. Relapse is not infrequent after operation (25 per cent.). Sir Dyce Duckworth presents a very short but useful lecture on Sciatica. Guisez is an enthusiast on Oesophagoscopy. His enthusiasm might lead the unwary to think that the passage of the oesophagoscope was a treat to which a patient looked forward with pleasure and his friends with envy. John H. Gibbon and D. L. Despard report three cases of melanotic sarcoma. They discuss the various theories of origin of these tumors; the connective tissue origin and the epithelial origin (Unna) and also Adami's views on the classification of tumors in general. As might be expected the lecture is thorough and scholarly.

Corner, of London, shows the influence of his colleague Lane in his views on the modern treatment of fractures by means of direct internal splintage. This subject has been ventilated much more in England than in America. Corner's ideas are interesting and instructive.

Müller has a long and beautifully illustrated article on adenoma of the thyroid. Clogg discourses on pericolic inflammation secondary to disease of the colon. This is a subject to which too little attention has been given and which is of much importance.

The other papers presented in this volume are interesting and instructive.

Genito-Urinary Diseases and Syphilis. By Edgar G. Ballenger, M. D. Lecturer on Genito-Urinary Diseases and Syphilis and Urinalysis, Atlanta School of Medicine. E. W. Allen & Company, Atlanta, Ga., Publishers.

In this little book the author aims to treat in a brief way all the important diseases on the subject. This is quite well done on the subject of urethritis and its complications, including gonorrhœa in women; the non-veneral topics also are fairly well considered, although quite briefly. The treatment of the subject of syphilis is entirely too brief to be satisfactory, only forty pages of the book being used for its discussion in all stages and phases.

Applied Surgical Anatomy, Regionally Presented. For the use of Students and Practitioners of Medicine. By George Woolsey, A. B., M. D., Professor of Anatomy and Clinical Surgery in Cornell

University Medical College, New York. New (2d) edition, enlarged and thoroughly revised. In one very handsome octavo volume of 601 pages, with 200 illustrations in black and colors. Cloth, $4.50, net. Lea & Febiger, Philadelphia and New York, 1908.

The study of anatomy is relieved of much of its difficulty when it is approached on the practical side. Isolated details do not arouse the interest of the student, but when they are set forth in their natural relationship, and their practical application is shown, the mind grasps and recollects them with facility. As anatomy is the most important of all the basic elements of medical science a working knowledge is indispensable for the study and practice of scientific medicine and surgery. The author has embodied these principles in his work and presents a book which in parts appears to be as much an anatomical surgery as a surgical anatomy. It will prove most valuable to the student who is finishing his study of anatomy and beginning that of surgery.

A Manual of Obstetrical Technique as Applied to Private Practice. With a chapter on Abortion, Premature Labor and Curettage. By Joseph Brown Cooke, M. D., Adjunct Professor of Obstetrics in the New York Polyclinic Medical School and Hospital. Sixth Edition, enlarged and fully revised. J. B. Lippincott Company, Philadelphia and London, 1908.

This is an intensely interesting and instructive little book of 255 pages, containing numerous excellent illustrations. Notwithstanding that it reviews some things in technique that have become commonplace to the old obstetrician, it affords an opportunity for profitable comparison of notes; and to the inexperienced it is especially valuable. To the nurse, who is ambitious to know more of obstetrical technique than the mere requirements of her training, the book will be found especially valuable. The author's teachings are plain, concise and comprehensive, such as every physician needs and must have at his command if he would handle confinement cases successfully. It is a handy and reliable reference book for the young man while obtaining his first experience.

O. L. P.

AMERICAN MEDICAL ASSOCIATION.

Next Annual Meeting at Atlantic City, N. J., June 8-11, 1909.

President: HERBERT L. BURRELL, Boston.
President Elect: WM. C. GORGAS, Ancon, Panama.
Secretary and Editor: GEORGE H. SIMMONS, 103 Dearbon Ave., Chicago.

MISSOURI STATE MEDICAL ASSOCIATION.

Next Annual Meeting, Jefferson City, May 18, 19, 20, 1909

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Assistant Secretaries: WILLARD BARTLETT, St. Louis; W. R. PATTERSON, Tipton; T. McLEMORE, Nevada.
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Surgical Section.

Chairman: PAUL Y. TUPPER, St. Louis. Secretary, WILLARD BARTLETT, St. Louis.

Eye, Ear, Nose and Throat Section.

Chairman: J. H. THOMPSON, Kansas City. Secretary, T. McLEMORE, Nevada.

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R. H. GOODIER, Hannibal.

Oration on Surgery:

F. J. LUTZ, St. Louis.

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Committee on Tuberculosis.

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Missouri Society of Medical Secretaries.

President, Foster W. Burke, Laclede; First Vice-President, M. A. Smith, Gallatin; Secretary-Treasurer, Chas. Wood Fassett, St. Joseph.

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Twenty-ninth District.—Councillor, A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Cedar, **Dade.**

***Counties in black are not organized.**

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St. Louis Co	C. A. Dunnavant	Kirkwood	W. H. Townsend	Maplewood.
Schuyler	E. L. Mitchell	Lancaster	H. E. Gerwig	Downing.
Scotland	W. E. H. Bondurant	Memphis	W. E. Alexander	Memphis.
Scott	W. H. Wescoat	Oran	W. S. Hutton	Fornfelt.
Shelby	J. D. Smith	Shelbina	A. M. Wood	Lentner.
Stoddard	Edward Moore	Bloomfield	John Ashley	Bloomfield.
Sullivan	J. C. Kessinger	Milan	J. S. Montgomery	Milan.
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Vernon	J. F. Robinson	Nevada	T. McLemore	Nevada.
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Washington	J. A. Eaton	Belgrade	W. S. Smith	Belgrade.
Wayne	J. P. Sebastain	Patterson	R. J. Owens	Mill Spring.
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JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume V FEBRUARY, 1909. Number 8

ORIGINAL ARTICLES

TREATMENT OF A FRACTURE OF THE SHAFT OF THE FEMUR BY COMBINED PLASTER OF PARIS AND LIGHT IRON SPLINTS.*

By W. B. Deffenbaugh, M. D., St. Joseph, Mo.

Much time, thought and ingenuity have been spent in an endeavor to render a person with a fracture of the shaft of the femur as comfortable as possible during the process of repair, and to prevent as far as possible the practically inevitable shortening which occurs in these cases.

In spite of these efforts the results usually obtained are a reproach to our profession as to ultimate results, and our patients have more discomforts and confinement to bed than they should have. Till these are overcome to a greater degree than they have been so far, it is a subject well worthy of our consideration. As a contribution toward that end I present for your consideration a method of treatment by the combined use of plaster of Paris and light iron splints.

The method has all the immobilizing properties of the ordinary plaster of Paris and the extension of the long Hamilton without its cumbersomeness and permits the patients to lie on the injured side if they so desire. As you are surgeons of experience, I will not speak of the symptoms, of the displacement of the broken ends of the shaft, but will at once show you the method of application, and let you judge as to its merits.

The splints are long, flexible ones, made of galvanized iron, one and one-half inches wide, and sufficiently long to reach from the waist line

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

to a little below the external malleolus. The upper end has some loops of a like material only half as wide bradded to the upper end (outside) three or four inches apart. One-third of the lower is perforated with nail holes. The object of the loops is for the purpose of the counter-extension. The holes are made so that the plaster of Paris will become incorporated into them to keep from slipping. A shorter one of like width and sufficiently long to reach from near the perineum to the inner malleolus constitutes the splints.

A strip of ordinary saddle leather I use on the perineal side of the thigh.

A strip of adhesive plaster two inches wide and two and one-half feet long, to be used on the outer side of leg for the purpose of assisting in the extension. Cotton batting, plaster of Paris bandages and few gauze roller bandages constitute the equipment.

The leg of the same side as the injured thigh is well cleansed and the hairs on the outer side from the knee to the malleolus are shaved off. The adhesive strip is laid on the leg from the knee down and should be long enough to reach five or six inches below the foot, a very thin layer of cotton applied over them, then a roll of plaster of Paris tightly rolled from the malleolus up to the knee. Then the long splint is laid on the outer side of the leg reaching from near the sole of the foot to the waist line. The adhesive plaster is now turned up over the end of the iron splint to the outer side and should reach up five or six inches.

The plaster of Paris bandages are then applied over the adhesive and iron splint in sufficient amount to make it firm, over which a layer of gauze bandage is applied. Let all this set well before proceeding.

The inner iron splint should be incorporated in the plaster at the same time the outer is applied. The iron splints are now bent down out of the way and the thigh is covered with cotton batting. If it is a fresh fracture, a very liberal supply of cotton batting should be used to allow for swelling, and if an older case, say eight or ten days, less batting should be used.

The leather being wet and rendered soft and pliable is now laid on the inner side of the thigh reaching half way up the front and a like distance behind, resting against the perineal region above.

The object of this leather is to provide for a more uniform distribution of pressure than you can otherwise obtain. The extension is now applied sufficient to overcome the shortening.

The splints (iron) are now turned up parallel with the thigh and body and your plaster of Paris bandages applied over them, covering the thigh just as if no splints were being used, and when the upper part of the thigh is reached the turns of the bandages should be passed over the loops on the outer side of the thigh near the upper end of the splint and should be drawn quite taut, as here is where we get the counter-extension.

Finally, around the waist and thigh, is a spica bandage; also around the hip and abdomen, a gauze bandage should have previously been placed.

Such, in brief, is the method of application. Now for the benefits as I have found them.

1. *Easily Obtainable.* Wherever there is a tinshop, one can be made in fifteen minutes.

2. *Cheapness.* Fifty cents being a good price to pay for one.

3. *Immobilization.* The plaster of Paris has for years been the best we possessed for that purpose, but from this alone no extension can be obtained. In this we have the immobilizing by the plaster of Paris.

4. *Extension.* In this we have an ideal form of extension, for we get our counter-extension from the hip bones—nature's mode. This extension can be increased without disturbing the dressings by means of bandages applied over the plaster and splints and around the loops.

5. *Lightness.* As the splints are light but strong, we need not use as much plaster of Paris as when they are not used.

6. *Promptness,* with which a permanent dressing can be applied. The splints can be bent up bow-shaped to allow for the utmost swelling, and yet not impair their extension properties.

7. *Time.* Less in bed than from any other method that I have seen.

8. *Ease of Application.* Every surgeon is not an adept in the use of plaster of Paris, but any one that is can successfully apply this bandage.

9. *Comfort.* By the use of this apparatus, if I may so term it, there is a minimum amount of discomfort, for the immobilization is as near perfect as we can make it. The extension is uniform and is not interfered with by changes in position of the patient, hence the patient may be placed in any position consistent with an extended leg and thigh.

DISCUSSION.

Dr. John D. Seba, Bland: In regard to fractures in general, I will say that the treatment is undergoing a great change; we used to put up fractures and then not look after them for three weeks, but we have found that is not the best method. If we put up a fracture, it should be done so as to allow of examination every week or ten days, and then we will know just what is going on, and if the bones are not in good apposition, we are able to put them in apposition. We now have less fear of slipping and over-riding of the bony structure; early massage is a most excellent treatment, if the fracture is near a joint; early passive motion of the joint is also to be highly recommended. If you have an appliance that has served you well, and that you know how to handle, it is best to stick to it and not take up with every new-fangled thing that is invented; but if your cases have not been entirely satisfactory to you, then you had better look for something new. All splints have excellent points in their

favor, and when bad results are obtained it very often is not the fault of the splint; it might be the fault of the patient, or possibly, the unskillfulness of the surgeon. We all need dexterity in applying ourselves to the needs of our profession; a good workman can do fairly good work with poor tools, whereas a poor workman cannot do good work with excellent tools.

Dr. Deffenbaugh (in closing): I object to this apparatus being called a splint. It is hardly worthy that. Likewise, if I had a fracture of the femur, I would object to someone taking the dressing off every day. Practically, the only means by which we can control fracture of the femur is by immobilization. The more it is moved the greater will be the amount of inflammatory exudate. What commends this apparatus to me is the ease with which it can be applied. It can be applied as easily as plaster of Paris. It has an extension which cannot be anything else than an extension, because it cannot become displaced. If you get the limb in position, it will have to stay in position. Every time you remove a dressing you increase the risk of irritation. With this apparatus, in a very few days the patient can be up and about, use crutches, and walk by that means.

FIBROID TUMORS OF THE UTERUS COMPLICATED WITH PREGNANCY.*

By Walter B. Dorsett, M. D., St. Louis, Mo.

If viewed from the standpoint of the surgeon, the above caption seems the more applicable. If viewed from the standpoint of the obstetrician, "Pregnancy complicated with fibroid tumors" would probably be a better title. Thus the condition presented interests the surgeon and the obstetrician alike.

Of so great an interest is the subject that to-day early surgical intervention in all fibroid growths of the uterus, no matter to what size the tumor has grown, is advocated.

The liability of these so-called benign growths becoming malignant has been the chief reason assigned by the radical surgeons for operative intervention. The coexistence of benignancy with malignancy has been the grain of sand that has turned the balance in the favor of surgical intervention, and the question as to whether malignancy is the sequence of a former benign condition or that the two exist coincidentally, and are not independent, remains so far *sub judice*. Careful work on the part of the pathologists has revealed elements of malignancy in uterine fibroids of pronounced macroscopical appearance and has influenced the surgical treatment toward removal of the tumors.

The three cardinal reasons for the removal of these tumors are:

(a) Rapidity of growth, indicative of beginning malignancy. (b) Menorrhagia, wherein lies the danger from the excessive loss of blood. (c) Interference of the functions of other organs by pressure.

As a proof of the unsettled question as to the time when uterine fibroids should be operated upon, I will say that this was vigorously discussed in the section on Obstetrics and Gynecology at the last meeting of the American Medical Association at Atlantic City, last year, and was far from being settled when the session adjourned.

Personally I have been inclined to postpone operative measures in women with uterine fibroids till one or more of the so-called cardinal symptoms became pronounced. I am now constrained to believe that possibly early surgical interference is more rational. I am led to this also by the possibility of pregnancy in the fibroid uterus as well as by the liability of cancer from degenerative changes that may at any time take place.

It is now fairly understood that the uterus that carries a fibroid is not apt to become pregnant, and further, that the fibroid uterus when

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

once impregnated is apt to abort; at the same time we do know that many pregnant women go to full term and are delivered, but this may be counted as an exception to the rule.

The causative factor, sterility, is, of course, in the majority of instances, mechanical; a distorted cervical or uterine canal, so also, the causative factor in abortions, is mechanical. The natural contractions and expansions of the uterus are interfered with, and the normal cavity is encroached upon by the neoplasm. When once those conditions present, there is a strong probability of abortion, more or less incomplete, offering more than usual obstacles to a perfect delivery.

The history of the case is as follows:

Mrs. A. F., age 35 years; mother of one child now 10 years old. Patient became pregnant about the first week of September. The usual nausea was present to a slight degree for three weeks and the absence of the menstrual flow aroused her suspicions as to the possibility of her being pregnant. Prior to this time and for the past three years the patient has experienced a marked menorrhagia and received the usual medicinal treatment. About the middle of last July she consulted Dr. H. A. P. who made an examination and made the diagnosis of enlargement of the uterus, supposedly due to inflammation or engorgement.

After passing the 6th week without menstruating, the patient came to St. Louis on a shopping expedition and while standing at a counter in one of our department stores had a sudden gush of blood from the vagina, which caused her considerable alarm, but after resting on a couch for a time was able to go to her home, a distance of 40 miles by rail. The hemorrhage ceased after the next day, and the day following this she was brought to my office by her physician, and I made an examination. At this time I found a slightly offensive discharge from the uterus, and on bimanual examination I could feel quite a large mass. Posteriorly it was soft to the touch, while anteriorly it was quite hard. I suspected pregnancy, but was in doubt between this condition and a sloughing fibroid. However, I advised an operation, to which the patient would not consent. She returned home that day, but after three or four days concluded to come to the hospital, where she was kept under close observation for several days before I operated. The operation, of supravaginal hysterectomy, was performed Oct. 19th. The uterus contained a fibroid tumor, and on being opened contained a dead fetus with membranes. Nearly the entire uterine cavity is taken up by the pressure of the tumor. It can be seen what difficulty the uterus would have encountered in the expulsion of the fetus and the decidua.

In the study of the case, the following points present themselves for discussion:

1. With our present knowledge, should we or should we not operate on all uterine fibroids as soon as possible?

2. What course should we pursue in cases of fibroid complicating pregnancy or in cases, if you choose, of pregnancy followed by incomplete abortion, such as we have in this case?

Before closing I will state that I have witnessed several myomectomies of pregnant uteri during the past summer by surgeons of more or less renown in this country.

DISCUSSION.

Dr. C. Lester Hall, Kansas City: I am convinced that we have in the past taken too many risks in not interfering where we have fibroids complicating pregnancy. I think the question of whether or not we should operate is answered in the affirmative without question, and I think the operation should be done. The dangers of twisted pedicle, as we have seen, demand interference.

PROPHYLAXIS OF INSANITY.*

By Wilse Robinson, M. D., Superintendent State Hospital for Insane, Nevada, Mo.

There are many, even among physicians, who are fatalists in their views on insanity. They claim to believe that a certain proportion of humanity is predisposed to insanity and will inevitably become insane some time, and there is no use trying to prevent them from doing so. I cannot accept this view of the subject any more than those who are doing such valuable work along the lines of preventing tuberculosis developing in those predisposed to that disease would be willing to adopt a do-nothing policy on the theory that as they are so predisposed they will have it anyway, so it is a useless waste of labor to try to prevent their having it.

It is true we do not know as much about the normal or perverted brain function as we do of the lungs, nor do we know as much about the physiology and pathology of insanity as we do of tuberculosis. I believe there are some insurmountable obstacles in the way of us reaching the goal of complete and thorough knowledge of this subject; we soon reach that stage in our investigations where we must supplement knowledge with belief and demonstration must give way to speculation. We do know that in the so-called insane we have in some manner a perverted brain function. This perversion and disturbance of function involves chiefly those neurones which form the so-called cerebral cortex.

According to function the cerebral cortex is divided into three separate areas. These are motor and sensory projection areas,—intermediate or memory areas, and the association areas. These areas are all very thoroughly connected by the long and short association neurones, the axones of which form many association tracts, and when these areas and tracts are normal in structure and function there is an harmonious interaction between all the areas.

There are several different views concerning the relations of thought and other psychic phenomena to brain functions. The two most generally accepted theories are the so-called materialistic and dualistic. Those who accept the materialistic theory believe that man is a monist, that all psychic phenomena are founded upon the material structure of the nerve cell, and that the chemical energy of the cell metabolism is without the aid of any extraneous power transformed into thought energy. They believe thought is a productive function of the brain.

According to the dualistic theory man is dual in his nature, having a physical reality and a spiritual reality; during the life of his physical

*Read by title in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

body his mind and brain are inseparably united by some power, and brain function is necessary for the mind to be able to perceive and manifest itself to other conscious realities.

Materialism says the visual perception area sees things, the auditory perception area hears things, the olfactory projection area smells things, the motor projection areas stimulate muscles to contraction, the secretory projection areas stimulate secretion, the intermediate projection areas remember things, the association areas think things, etc.

According to the dualistic theory, when the visual projection area is stimulated, the mind sees things, and when the auditory, gustatory, olfactory, and tactile projection areas are stimulated, the mind hears, tastes, smells and feels things. When the intermediate or memory areas are stimulated, the mind remembers things, and when the association areas are stimulated, the mind thinks things.

The dualists agree that thought is a function of the brain, but they believe it to be a transmissive instead of a productive function.

When the cortical areas are all normal in structure and function and we get an harmonious inter-action of them, we speak of a normal mind. The mind is normal in its manifestations because it is able with the normal brain to correctly perceive the various impressions that are brought to the brain by centripetal neurones from peripheral sense organs, the percepts can be properly synthetized into concepts, and the mind can in a normal manner transmit its thought through the brain and manifest itself to other conscious realities.

The most simple thought processes involve a very complex brain action, and for all normal phenomena of consciousness it is necessary that there be a normal inter-action of practically all the cortical areas. It is a very easy matter for the thought processes to be perverted, and such perversion may be of various degrees, and is dependent upon very many abnormal conditions of one or more cortical areas.

Based upon the various degrees of perversion of thought processes, several theories have been advanced concerning the sanity and insanity of man.

First, we have the very simple theory accepted by the world at large and by some physicians, namely, the so-called two-block theory. This theory makes a simple division of mankind into two parts, the sane and the insane. This is a very convenient theory for lawyers, judges and juries. They would like to impose it upon physicians and compel them to answer yes or no to the question, "Is the accused sane or insane, responsible or not for the crime?" Those who accept this theory would put a fence around the insane hospitals and say all inside are insane, all outside sane; like saying all those inside the cemetery are dead, and all those outside the cemetery are living.

Another theory which is held by many physicians and scientists is the so-called one-block theory. This theory assumes that everybody is insane in a different degree. According to it there is a continuous

gradation from the most intelligent to the least intelligent. Hericourt says, "We all of us show some defect, some anomalies and some weak points." Parrot says, "Wait! Look around you on all your little company! Do you not believe that all your comrades are more or less cracked? Think of the slight knocks that would break their reason completely and make them totally insane. It is only a question of degree!" Of these two theories, the latter is the better. The former, or two-block theory, that would divide the sane sheep from the insane goats, build a stone wall between, place all of humanity on one side or the other, and leave a few holes through which an occasional sheep can pass over to join the goats, and a goat can now and then pass over to join the sheep, is wrong in principle, and is not consistent with the facts.

The one-block theory that would have all of humanity insane in varying degrees is also wrong. It is true insanity is a relative term, and varies much in degree in those affected, but there are a very large number of people that are unquestionably sane. There is no lack of harmony between the various portions of their nervous system; there is a good interaction between the cortical brain areas, and the mind is able to properly perceive with its perception mechanism, and transmit thought by its transmissive mechanism.

There is also a very large intermediate class who are of the order of the lucid semi-insane, or, as Grasset classes them, the demi-fous. These patients have what is called reasoning mania. Many of them are lucid, logical, oftentimes vivacious, fluent speakers, brilliant writers, good musicians, successful business and professional men. They do not appear insane because they can express themselves lucidly. They are insane in their actions rather than in their words. They have good powers of attention, and even in their delusions are lucid. Guislain says that many of them are able to disarm the most solid logicians.

Trelat placed in the class of semi-insane some of the high-grade imbeciles and feeble-minded, those with good memory, good powers of attention and considerable ability to learn. In this class are many young people who are proper in their deportment, elegant in their clothing, but so lacking in intelligence as to render them irresponsible for their actions.

Satyriasists and nymphomaniacs who have an abnormal passion for any member of the opposite sex, are semi-insane. In this same class are the erotomaniacs who usually have a consuming passion for but one other person. The very jealous man or woman is semi-insane. "They neither enjoy nor let any one else enjoy any tranquility. They take everything in the wrong way, twist all facts, accuse people of wrong intentions, compromise the absent and end up, by virtue of their quarreling, by becoming odious."

Another class of semi-insane are the dipsomaniacs. They differ in their habits from drunkards. The drunkard drinks to excess whenever he has a supply to drink, while the dipsomaniac gets drunk whenever the impulse to do so comes on.

Chronic evil-doers are classed as semi-insane, as are kleptomaniacs, suicides and the inert.

Patients with lucid mania are semi-insane and are frequently committed to hospitals on the theory that they are insane. Their maniacal outbursts have some analogy to attacks of rage. They are lucid in their attacks and there are no symptoms between attacks.

Another not unusual class are the spendthrifts and adventurous characters; also the conceited and boastful. This latter class of patients care for nobody, they are incapable of gratitude, of devotion or real regret. They have only one thought and one motive, their own personality and pride.

Monomaniacs are only partially insane, and are in good mental condition in all respects and on all subjects but the one. Even in their delusions they are lucid and logical.

The above mentioned classes include the more common of the so-called semi-insane. They show certain very characteristic symptoms. These symptoms are manifested by three distinct groups. Some patients confined in hospitals show these characteristic symptoms and are not insane in so far as the major portion of their psychic activity is concerned, and their delusions are frequently only discovered by a long series of investigations.

Another considerable class that show symptoms of semi-insanity are many patients who have been in insane hospitals, discharged as restored, and fear a relapse.

The third and most important group of the semi-insane are those who have never been wholly insane, who manifest the mental characteristics of the semi-insane throughout life. The symptoms of the semi-insane do not differ in quality but only in quantity from many of the symptoms observed in the insane.

The following are some of the more common symptoms of the semi-insane: Illusions and hallucinations of one or more senses; obsessions, usually divided into phobias and ideative obsessions; delusions of culpability, persecution, grandeur, defense, hypocondriacal, negation, heinous, religious, erotic. Impulsions are quite commonly observed in the semi-insane. These impulsions, according to Regis, are impulsions to tics, gestures and words; to actions ridiculous and clownish, stupid and extravagant, coarse and repugnant, erotic, incendiary, of appropriation and theft; to actions of violence against others and impulsions to become intoxicated. Other symptoms of semi-insanity are aboulias and paraboulias, or weakness of the will, disturbances of sensibility, disturbances of personality, and the idea of the ego; disturbances of the social psychism, and disturbances of the sexual and family psychism.

Semi-insanity occasionally occurs in the course of the following mental disorders: Chronic mania, melancholia, mental confusion, progressive systematized psychoses, degeneracies, epilepsy, hysteria, neurasthenia and psychasthenia.

The semi-insane are not all harmful and useless members of society, but on the contrary many of them have been of much social value and have exercised a marked influence upon the literary and artistic progress of their century.,

In addition to the considerable number of persons who could be classed as semi-insane, about one person in every 250 or 300 are insane, and the number is increasing at an alarming rate not only in our own land, but in every other civilized land.

The insane patient differs in a considerable degree from the sane person and in a less degree from the semi-insane. This difference is noted in the actions, illogical and confused ideas, incoherent and disconnected conversation, perversion of sense impressions, disturbances of memory, etc.

The insane patient is not a useful member of society, but he is usually a menace to the public, and a source of much worry and trouble to his friends. As stated above, I do not agree with those who are disposed to accept an increase of insanity as one of the necessary evils of our civilization, but I believe that at least 50 per cent of those who annually become insane could be prevented from losing their reason by proper care and treatment. To do this we must have a more thorough and general knowledge of the nature and causes of insanity.

We must recognize the fact that it is a physicial disability and is dependent upon physical causes for its development. It may be very diverse in its manifestations. In one patient there may be such a loss of energy that a will-less condition exists; in others there may be such a perversion of the moral nature that the term moral insanity is justified; in some the judgment is chiefly affected.

Age has considerable influence upon the character of the insanity. The insanity of development usually ends in arrest of mental development with a resulting idiocy or imbecility. The insanity of adolescence is more severe than that among children with a similar danger of arrested mental development but with a better prognosis.

The greatest number of insane patients are found in the period of maturity. This is the period of greatest stress. It is the period of work, ambition, disappointment and the uncurbed exercise of the largest number of the faculties of mind and body.

Following the period of maturity we have the period of decay. During this period we see manifested many forms of nervous death, some being rapidly destructive and others leading slowly to euthanasia.

At these different ages various causes operate in producing the insanity. At all ages predisposition is an important factor. This predisposition consists of an inherited or acquired defect of development. A quite common defect is an imperfect development of the circulatory system of the brain. If the arteries are defective the result is an inadequate supply of nutrient material to the neurones during activity; if the veins or lymphatics are defective, there is an imperfect removal

of waste products from the brain with a resulting poisoning of the neurones. Another hereditary defect is an abnormal connection of the neurones of different areas, or a bad connection of the cortical areas with the peripheral nervous mechanism. A quite common hereditary defect is a condition of the neurones, chiefly of the cortex, by which they are unable to transform the chemical energy of food compounds into nerve energy or to discharge the nerve energy after it is liberated with sufficient rapidity. Then, too, certain defects of general body or special metabolism are inherited. The organs, such as the thymus, which synthetize the chemical compounds used by the neurones in liberating nerve energy and building up the waste, may be imperfect in structure and function and the result is an inadequate supply of proper material for the neurones to use during functional activity. Another metabolic defect which is inherited and helps to cause semi-insanity and insanity is an inability of the internal secretions and the tissues to break up the tox-albumins which are formed during proteid metabolism, and as a result of infections and convert them into non-toxic compounds.

A predisposition to insanity is frequently acquired as a result of diseased condition and vicious habits. While there is a predisposing factor present in all insanity, there are also one or more exciting causes present in each and every case.

The exciting causes differ considerably according to age and the form of insanity. In early childhood the exciting causes are infectious diseases, such as scarlet fever and diphtheria, stress and strain at school, fright, inadequate and improper food and toxæmic conditions.

The exciting causes of the insanity of adolescence do not differ to any appreciable degree excepting that the sexual life has considerable influence upon its causation at this particular age. The exciting causes of insanity during puberty are so nurmerous that time will fail me to mention them all. Chief among them are toxæmia and stress.

The toxæmias are divided into exo-intoxications, auto-intoxications and infections. The chief exo-intoxications are alcoholism, saturnism, morphinism and chloralism. The auto-intoxications are chiefly gastrointestinal, genital, hepatic, renal, thyroid, cutaneous, ptuitary, suprarenal, etc. The infections are chiefly typhoid, la grippe, pneumonia, eruptive fevers, erysipelas, cholera, tuberculosis, cancer, syphilis. In practically all cases of insanity we find the hereditary or acquired predisposition, toxemia and stress operating together as etiological factors.

Heredity is such an important factor that I believe very few become insane who have not an hereditary predisposition, and for this reason a long stride in the prevention of insanity will have been taken when marriage is interdicted for those whom experience has taught us are prone to beget insane offspring. These are chiefly the semi-insane, epileptics, chronic alcoholics, hysterical, insane and syphilitics.

The next step in the phophylaxis is the protection of the predisposed child. The physician forms an early acquaintance with the child; and

the parents of all children with physical and psychic stigmata should be warned of the danger to which the predisposed child is subjected by being treated like other children, and when he enters school the teacher should be instructed so that the child may receive the minimum amount of injury with the maximum amount of good from his school training. Such a child should not be rushed or pushed in his book work and should be encouraged to take much outdoor exercise. This outdoor exercise should not be gained by useless wanderings but it is much better if he should be given some useful employment. His food should be ample in quantity and of good quality and he should be carefully guarded against excesses of any sort, especially as regards sexual, alcoholic and excessive fatigue with an inadequate amount of sleep. Undue excitement, such as religious, worry and disappointment frequently result badly during the period of adolescence. The predisposed child should be educated carefully and advised to adopt a vocation that will give him much outdoor work, such as agriculture, rather than a more sedentary occupation.

Predisposition alone will not cause insanity; there must be some exciting cause in operation and usually several exciting causes work together. As mentioned above, some several forms of intoxication act as exciting causes. Of the exo-intoxications alcohol is the chief. It is directly responsible for about 20 per cent of all cases of insanity and is indirectly responsible for about 30 per cent more. Its action in causing insanity is typical of many of the exo-intoxications. It acts when taken to excess by poisoning the nerve cell so that it is unable to use the nutrient material in repairing the waste: it is unable to take care of the stimuli that reach it and cannot, when so poisoned, transform the chemical energy of food into nerve energy for the performance of its functions, and the result is neurone degeneration with various mental disorders. In addition to the action of alcohol upon the neurones it poisons and so interferes with other tissue cells that such organs as the stomach, intestines, liver and kidneys are unable to perform their function and other toxic substances are thrown into and retained in the circulation and act detrimentally upon the neurones and, too, alcohol induces an arterosclerosis of the brain, so that the neurones cannot receive enough blood for their needs.

Syphilis is credited with causing considerable insanity and does seem to be responsible for practically all of the paretic dementias. It is remarkable, however, that while syphilis is quite prevalent among Mohammedans, who do not drink alcohol, paretic dementia is practically unknown. The inference is justly drawn that syphilis alone will seldom cause paresis, but when the syphilitic patient adds alcoholism to his syphilis the two poisons working together cause a degeneration of his neurones. The prophylaxis of all insanity directly or indirectly due to alcohol is to educate the people against its excessive use, prevent the chronic alcoholics from marrying and confine them until dead or cured.

The prophylaxis against other forms of toxic insanity will depend largely upon the forms of toxemia. The manner of preventing insanities from exo-intoxication is to remove the patient from the influence of the toxic substance, put the patient to rest and stimulate elimination.

The auto-intoxications mentioned above are the exciting causes which send many patients annually to insane hospitals. In fact I believe this to be the most frequent cause of any. No one is safe who has an auto-intoxication and every one so afflicted should be most carefully treated. The proper treatment is rest, elimination and diet.

The toxemias from infectious diseases while not such an important factor in causing insanity do quite frequently cause it. Rest, elimination and diet until all evidences of the infection have been removed is the most successful treatment.

Much has been said and written about stress as a cause of insanity. Uncomplicated stress will not cause insanity. There must be present as a contributing factor, a predisposition or toxemia and usually both are present. Hodge has demonstrated that mental and physical labor have a marked influence upon the nerve cells. The Nissl bodies which contain the most easily metabolized food compounds disappear, the cells decrease in size and become irregular in outline, and the nucleus becomes acentric. While the nerve cells are in this condition the blood is loaded with toxic acid fatigue products which decrease its alkilinity and the supply of food available for the neurones has been considerably decreased: as a result of this the threshold stimulus is raised and a sense of fatigue prevails. If conditions are favorable, after a short period of rest the neurones become normal in appearance and irritability, but if the conditions be unfavorable there is only partial recovery during the period of rest.

Among these unfavorable conditions may be mentioned an inherent weakness on the part of the neurones to appropriate to their use food materials and transform their chemical energy into nerve energy, an inadequate synthesis of proper food compounds by the synthetizing organs, such as the thymus, an imperfect cerebral circulation by which an insufficient supply of food is carried to the neurones and the waste products imperfectly removed therefrom.

Other conditions which delay abnormally the reconstruction of the fatigued neurones are a hypo-activity of the eliminating organs with a resulting prolonged retention in the circulation of the acid fatigue products. Toxemias also interfere with the reconstruction of the fatigued neurones.

If for any of these reasons mentioned the neurones are unable to reconstruct themselves rapidly after fatigue, they must resume a functional activity while still in a state of partial fatigue, and add to this the influence of toxemia which interferes with their nutrition, we have a condition present in which they are unable to properly respond to the vast number of stimuli which reach them, and the result is very fre-

quently a destruction of the more stable neurone elements with starvation or degenerative insanity.

Labor that requires excessive fatigue and strain should be interdicted for those with a predisposition to insanity while suffering from any form of toxemia, or while the blood is loaded with acid fatigue compounds.

More recreation and diversion especially for the agricultural class should be advised, as well as a more carefully selected diet. I have observed that at least 90 per cent of all patients, excepting the senile, received at State Hospital No. 3 are poorly nourished, constipated, toxemic, have a hypo-alkilinity of the blood and a scorbutic appearance. Some of them have been in this condition so long that irreparable injury has been done to their neurones and they are doomed to live the rest of their lives at the hospital. By the proper application of the three remedies, rest, elimination and diet a great many of them need not have entered the hospital, and many more of those who do enter could be restored if the family physician would use his influence to have the patient sent to the hospital for treatment as soon as the first symptoms of insanity appear, instead of keeping them at home as long as possible, where they are usually very improperly cared for and nursed by their freinds even though the medical treatment be ever so good. For these patients rest means rest in bed, as any other sick patient should be treated, elimination by continuous hot baths and by all other methods possible should be adopted, and a diet of eggs, milk and a large quantity of fruit juices is indicated. The state should build an institution where those threatened with the curse of insanity can go of their own accord to receive proper preventive treatment. In this manner many lives could be saved to the service of the state that are annually becoming a permanent burden.

Every insane hospital in the state has many patients who are semi-insane and others who are neither semi-insane or insane who should be sent to a prophylactic hospital instead of an insane hospital.

In closing I want to appeal to the physicians of the State to cast aside silly and unscientific prejudices against the insane hospitals and advise the friends of patients to take them to the hospitals for treatment as soon as the first symptoms of insanity appear instead of waiting until they can no longer keep them at home. This system is helping to fill our insane hospitals with hopeless insane. I am aware that the prejudice of the laity and physicians is decreasing but there is still room for improvement.

THE NATIONAL PUBLIC HEALTH MOVEMENT.*

By M. P. Overholser, M. D., Harrisonville, Mo.

In April, 1907, less than two years ago, a committee of 100 was organized to advance the cause of national health. The great purpose of this committee is to create a strong public sentiment in favor of national supervision of public health matters. This committee of 100 is composed of prominent clergymen, lawyers, physicians, educationalists, sanitarians, philanthropists, capitalists, statesmen, and others. Among the names of this committee we find the names of such men as Rev. Lyman Abbott of New York City, prominent clergyman and writer; Rev. Edward E. Hale, Chaplain of the United States Senate; Luther Burbank of Santa Rosa, California, the great horticulturist; Andrew Carnegie of New York City, the great capitalist and philanthropist; Hon. Joseph H. Choate of New York City, prominent attorney and ex-ambassador to England; Thomas A. Edison, the great inventor, of Orange, New Jersey; Hon. Ben B. Lindsey of Denver, originator of the juvenile court; Melville E. Stone, manager of the associated press; Hon. Luke E. Wright, our present secretary of war; Irving Fisher of New Haven, president of the committee of one hundred; Dr. Charles A. L. Reed of Cincinnati, and eighty-nine other members of national reputation, many of them prominent physicians, sanitarians, hygienists, and political economists. One hundred such men should certainly be a power behind any national movement.

The work of this committee has been to build up a strong organization in the United States called the American Health League, composed of members, men and women, who will seek to promulgate the idea of a National Bureau of Health. This committee has appointed local advisory sub-committees in various cities and towns throughout the United States whose duty it is to coöperate with the county, district, and state medical organizations in presenting this important matter to the public, showing them the necessity of this undertaking, to explain to them how this work is being done, and to present some of the great problems of public health which now confront our nation, states, and municipalities. In short to conduct a campaign of education, to enlighten the people, to arouse public sentiment, to induce a universal comprehension of the importance of this movement, and thus to obtain the coöperation of the American people in the inauguration of the necessary reforms for the proper protection of the health and lives of the people of our nation. That the preservation of the health of the people of our nation is of paramount importance,

*Read at a public meeting at Nevada, Mo., Jan. 7, 1909, under the auspices of the Vernon County Medical Society and the Hodgen District Medical Society.

no one can question. The preservation of our national health means the preservation of the greatest resource of our country. President Roosevelt said: "Our national health is physically our greatest national asset." Notwithstanding the great and rich resources of our country in railroads, mines, forests, farmlands, livestock, and coin, it is nevertheless a fact that human lives, or human capital, is by far the greatest capital of our nation. The most valuable asset of a nation is therefore represented in its vigorous population. National health means national wealth, for epidemics of disease paralyze business industries, and the burden from sickness and the loss from death bring poverty to many homes. Dr. S. N. Patten in his "New Basis of Civilization," says, "that disease is one of the greatest sources of poverty in the United States. One-third of the workers of our country die between the ages of 25 and 50 years. This means that a large proportion of families are deprived of their bread winner and in many cases are left struggling on the line of starvation. Improvement in the public health by prevention of disease by sanitation will therefore be a most important factor in abolishing destitution." "Of the great movements which have been undertaken by our nation to promote material development, to preserve our national resources, to maintain and increase our national wealth, I will have to say," says a great political economist, "that all these things combined do not begin to compare in importance with the great movement now on foot for the preservation and promotion of national health. When we realize that 1,500,000 persons must die in the United States during the next 12 months, and that 4,500,000 will be constantly sick, and that 5,000,000 homes consisting of 25,000,000 persons will be made more or less wretched by this mortality and sickness," can we conceive of a more worthy undertaking by the American people than a movement which will seek some practical means by which disease and death can, to some extent at least, be curtailed? "That there are lamentable wastes of our civilization to-day by preventable death, preventable sickness, preventable conditions of low physical and mental efficiency, and preventable ignorance are clearly seen by all those who have studied the health conditions of our nation." We find that one-half of the deaths of the human family, deaths as the result of disease, are from diseases produced from outward or external causes, from various environmental conditions, due to the presence of the specific germs of disease, from unsanitary surroundings, impure water supplies, infected foods, and various other external causes and conditions, all of which are largely controllable by proper sanitary measures. Between the ages of 20 and 30 years over 50%, over one-half, of all deaths are caused from three diseases alone, namely tuberculosis, pneumonia, and typhoid fever. The conditions and laws under which the germs of these three diseases multiply and are scattered among our people have been so carefully studied that they are now as well known to the scientific world as the methods of distributing the seeds of wheat, corn and weeds are known to farmers, and that these infectious diseases

are as impossible without the germs as any crop would be without the seed. To obtain complete control of these disease-producing germs would be to stamp out these diseases. This would be an ideal system of sanitary supervision, public hygiene, and subjection of these disease-producing agents, a happy condition, indeed, scarcely within the domain of sanitary science, yet Pasteur, the great investigator of the causes and management of human infections, has said that it is possible for man to rid himself of every parasitic disease. But even if we should question this statement of this great authority in medicine and feel that we cannot hope for such a perfect system of preventative, yet we do know that by proper rural, municipal, state and national control of these infective, disease-producing agents that the percentage of sickness and death can be most surprisingly reduced. We are told by reliable authority, by men who have carefully investigated the causes of deaths of the American people for a number of years, that the number of preventable deaths which occur in the United States during a single period, run up into the millions. In this age of scientific investigations we can no longer look upon these infectious diseases as insoluble mysteries, or as unpreventable affections, or as inscrutable visitations of Divine Providence as a consequence or punishment for wrong doings, but as the result of specific conditions, and specific agents which are largely controllable. The prevention of infectious diseases becomes, therefore, very largely a great problem of engineering, which will place in the hands of our people, by our state and national governments, the means and information which will give them the power to control, destroy, prevent, drive back, or engineer against these disease-producing agents.

Of our 80,000,000 in the United States to-day, 8,000,000 of this number are doomed to die sooner or later of tuberculosis, consumption, under the health conditions as they have been during the last number of years. In Missouri to-day there are 20,000 cases of tuberculosis, 5,000 of these cases die every year. Over 30,000 cases are found in the state of Illinois, 7,000 of which died last year, and other states have their share in proportion to their population. This white plague, consumption, costs Missouri $22,000,000 annually, while in the state of Illinois its annual expense exceeds $36,500,000. The economic loss to the United States last year from tuberculosis alone was over $300,000,000. As many deaths are caused from tuberculosis in the United States every year as the deaths caused from peritonitis, appendicitis, scarlet fever, typhoid fever, diphtheria, lagrippe, cancer, and smallpox all combined. The death rolls of the world in the battles of the last century were about 14,000,000. The death roll from consumption in the same countries and same period of time 30,000,000. The black plague killed 50,000 in one year. The white plague kills over 1,000,000 of the world's population in a single year, over 100,000 every thirty days. "We look with horror upon the black plague of the middle ages, but this black waste was but a passing cloud compared with the white waste visitation, consump-

tion, which continues to devastate this land of ours year after year." From 150,000 to 200,000 of our people die in the United States every 12 months from tuberculosis, one death every three and one-half minutes from this one disease alone. 800,000 more are crippled, disabled and constantly sick during this same time from this infection. Motherless children, widows, orphans, poverty and want are found all along its trail. Homes broken up, blighted hopes, lost ambition, uncontrollable mental anguish and sorrow, physical suffering, hundreds of thousands of dollars gone from loss of labor, besides the lives, health, and vigor of so many of our valuable citizens, and yet in the face of these stern and truthful facts our national government does not raise a hand to help. "If a foreign foe should devastate our country giving battle to our best citizens every 60 days with a loss of 25,000 killed and 130,000 wounded or disabled, at a cost of over $300,000,000 annually, would not each paper of our land echo a war cry in every column and demand that every state and national energy be arrayed in our defense? And yet this is the exact situation except that the foe is not a foreign invader, but an ever present, insidious, creeping assassin, claiming as its victims one-tenth of all living and choosing mainly those of early adult life." These are no overdrawn statements but facts that are given us from census reports and by comparison with statements of boards of health of the various states of our union. Consumption does all this, kills 5,000 in Missouri every year, from 150,000 to 200,000 in the United States, cripples and disables 20,000 more in Missouri and 800,000 in the United States every 12 months, costs our state $22,000,000 and the United States over $300,000,000 annually and yet, excepting the preventative measure from meat inspection and a few other precautionary measures, nothing has been done by our national government to check the ravages of this disease and to prevent this wholesale slaughter of our citizens by this insidious foe. 300,000 of the present population of Missouri will in time die of tuberculosis unless this disease is checked. Within the next 24 hours nearly 500 families in the United States will gather around the caskets of their dead, victims of death from consumption. Think of it; what an enormous preventable waste of human life, with apparently but little concern to our national government. Our nation was shocked with the news of the terrible calamity which befell the cities of Messina, Reggio, Scilla and others. With a great heart of sympathy our national government sent its great war vessels with nearly a million dollars worth of supplies to the helpless, terrified, suffering survivors of this desolated district. This was right. Yet every twelve months our nation submissively yields to this preventable white scourge as many of its valuable citizens from the homes in our own land as went down in the earthquake of Sicily and Calabria. No war ships with supplies for these helpless, suffering, dying victims. No soldiers to prevent the spread of this pestilence. No sanitary police to protect the innocent from this deadly infection. Why is this? Surely there is something wrong somewhere.

Where lies the fault and what is the remedy? The appalling death rate of this disease and the consequent amount of suffering and poverty caused by it in the face of the possibilities offered by proper sanatorium care and treatment, proper national, state, and municipal control of the infection, is an opprobrium upon our boasted Christian civilization of to-day. Here is a disease with a known cause and preventable in 75% of all cases, and sanitarians tell us even to a greater per cent than this, with proper restrictions and proper sanitary regulations, and yet it is allowed to go on in our midst, a constant source of danger to every one, the greatest source of private misery, suffering, poverty and death, the destroyer of thousands of lives that would have added great good and great wealth to our states and nation, and yet there has been no great popular outcry from the people of this land for our national government to open the coffers to battle against this fearfully destructive, ever-present foe. In Prussia to-day 31,000 lives are saved from death annually which under previous health conditions would have died of tuberculosis. In England and Germany the death rate from tuberculosis has been reduced over 50 per cent which good work has been accomplished during the last 15 years. At the International Congress for the prevention of tuberculosis which met in Washington some months ago this was the motto of Germany: "No tuberculosis in Germany after 1930." In 21 years the German nation expects to stamp out tuberculosis in their country. "During the next ten years more than 6,000,000 of infants under two years of age will end their little spans of life while mothers sit by and watch in utter helplessness," and yet this number could probably be decreased by as much as one-half under proper national sanitary supervision with the dissemination of practical hygienic information, but nothing is done. The department of agriculture now spends $12,000,000 on plant health and animal health every year, but with the exception of the splendid work of Drs. Wiley, Atwater, and Benedict, Congress does not appropriate one cent for the physical well being of the infants of our land. It is acknowledged by political economists to-day that the greatest wastes sustained by the American people are on account of preventable sickness and death,—the loss of lives, health and vigor of our people, and yet there is nothing to which they seem to devote so little thought or care, or upon which they are so little informed by our national government. The study of the principles of sanitary science has been sadly neglected by our American people.

"Thousands of dollars have been spent in stamping out cholera among swine, but not a dollar was ever voted by our national government for eradicating pneumonia among human beings, a disease which in time will carry off 8,000,000 of our entire population. Hundreds of thousands are consumed in saving the lives of elm trees from the attacks of beetles, in warning farmers against the blights affecting potato plants, in importing Sicilian bugs to fertilize fig blossoms in California, in ostracising various species of weeds from the ranks of useful plants,

and in exterminating parasitic growths that prey upon fruit trees. In fact the department of agriculture has expended during the last ten years $46,000,000, but not a wheel of the official machinery at Washington was ever set in motion for the prevention, cure and alleviation of diseases of the people in general throughout our nation, none for diseases of the heart and kidneys which will carry off 6,000,000 of our entire population." $2,000,000 appropriated by our government for a life-saving service against accidents of the sea, none for a life-saving service in general against the accidents of infection which cause disease, except the protection afforded by meat inspection in our packing houses and the pure food law.

These are facts that perhaps few of us have known, and in the face of these deplorable conditions we may well wonder why it is that the health of our people has been so long neglected by our national government and considered secondary to the health of animal and plant life. There are several reasons for this. "In the first place we are a commercial nation. Human life and freedom from disease are no part of foreign and domestic trade;" hence human health, human diseases, human suffering, human lives, have been in the eyes of our national government of minor commercial importance. "From a financial standpoint we can clearly see that it is good business to spend tens of thousands of dollars against sheep scab, swine and chicken cholera, the epizootic of horses and cattle, and against the various parasites which prey upon plant life, for the products of the fields, forests and cattle ranges bring us great wealth." The commercial interests of our nation have so absorbed the attention of the legislators of our national government that their eyes seem to have been blinded to the great needs of public health legislation. A still greater reason why we have accomplished so little for the good of public health is because of lack of public sentiment on this important matter. Everybody's health seems to have been nobody's business. Another reason why the health of hogs, cattle, sheep, and plant life has received such great attention from our national government while that of our people has been so woefully neglected, is this great question of state rights and federal rights. "Our national and state authorities have held that in many of these health matters that our national government has no right to encroach upon state police powers." "The proposition that the national government should exercise certain functions which seem to belong to the state has created much disturbance in certain quarters at various times in the history of our nation." Is it not singular that our nation can spend millions of dollars in deepening harbors, improving water-ways, and in building large irrigation dams and irrigation canals for the promotion of its agricultural and commercial interests and that it cannot, according to our constitution, without the consent of the states concerned, spend one dollar to prevent our streams from becoming open public sewers, full of filth, pollution, and disease-producing germs of all kinds? "It is

said that the purity of interstate waters can be conserved only by co-operation of the governments of states concerned, and that national control of sanitary supervision of inland waters can be granted only by constitutional amendment." (Harrington). Our President said: "It seems to me that such questions as national sovereignty and state rights need to be treated not empirically or academically but from the standpoint of the interests of the people as a whole." Only after Scranton faced a thousand cases of typhoid fever did it assert itself and demand protection for its water supply. "To-day the Ohio river represents a thousand miles of typhoid fever and the Hudson river a cloaca maxima from Albany to the sea." The prevalence of this deadly typhoid infection among millions of our people arising from the contamination of drinking water and ice and the rapid increase of the pollution of our rivers, the sanitary supervision of interstate waters, and other great problems which concern the public health, demand the attention of the American people of to-day. Because of our constitutional limitations in reference to many of such important matters which concern the health of the people of our nation and which can be remedied only by federal authority, the annual wastes of human life, preventable sickness, and a vast amount of unnecessarily impaired health and physical debility are permitted to continue year after year with an enormous pecuniary loss and social burden which might be in a great measure avoided were it not for this question of state rights and federal rights. "State rights prevented national quarantine for about a century," and has handicapped our nation in the supervision of important national pubilc health matters until it now seems that a pressing necessity for special constitutional provision for the remedy of these conditions is now fast approaching us. The health of a nation is surely a national consideration, involving even international coöperation. State lines are not respected by epidemic intruders. No state barrier can be so defensive and impenetrable that the infectious and disease-producing germs cannot get through. When public sentiment is thoroughly aroused in this matter and our federal government is invested with the power to act in the interest of the health and lives of its citizens, from the standpoint of public health, we predict that the coming wide-awake, competent national health officer is destined to be one of the most important agents of future civic administration, for I dare say that it is as unwise to trust the care of the state and national health to a financier, however astute, as to expect a postmaster general to understandingly control a bureau of agriculture, or a fishery commissioner to best administer to the affairs of public schools, or an attorney general to direct the horticultural or mining interests of a nation. The more we investigate and study this subject the more we will realize that this question of national sanitary administration is fast becoming a momentous question, and the movement behind it should rapidly become a gigantic one, and if it becomes necessary to make some changes in our constitution in order to give us federal authority on questions concerning the

lives and health of our people, is there any good reason why it should not be done? "Submission to the majority rights is a fundamental principle of civil government, and just as individuals and municipalities must be subordinate to the general welfare of a state, so should state rights, as to matters of public health, be subordinate to the rights of the nation."

California is to-day paying for her sins of eight years ago in suppressing honest reports of the bubonic plague when she should have been suppressing the plague itself. That this dreaded Asiatic pest maintains its foothold there is due largely to the cowardice and dishonesty of the clique then in power and which constituted a scandal scarcely paralleled in our history. When this dangerous pest was gaining ground in San Francisco, local politicians aided the Chinese in hiding their sick and in shipping them to other points. Unscrupulous physicians were induced to diagnose many of these cases as an infection from chicken cholera, hemorrhagic blood poisoning, diphtheria, and other known and unknown diseases. The governor spent the state's money in repeatedly wiring positive, misleading, unauthorized statements to Washington. His State Board of Health refused to stand by him. He then cut off their appropriations, whereupon they resigned, and he then secured a more servile board. Many of the newspapers were denying the real facts of the epidemic: "Plague Fake Part of Plot to Plunder," "There is No Bubonic Plague in San Francisco," were announced by big head lines in the leading papers of the state. Dr. Kinyoun of the Marine Hospital Service, and Dr. Williamson of the city board of health, both declared the plague to be present in the city. The governor of the state issued a proclamation at the same time declaring that there was no plague in San Francisco. The business interests represented in the merchants association appealed to Dr. Kinyoun to suppress his reports to Washington. This he refused to do. The newspapers were strenuously denying all the real facts of the epidemic until their policy culminated in complete suppression of plague news. Arrested twice on trumped-up charges, threatened for contempt of court, Dr. Kinyoun continued to fulfill his duties. His life was threatened and infamous calumnies were heaped upon him. The representatives of the business interests and the health interests clashed in San Francisco day after day. "Kinyoun, the Enemy of the City," "Has Kinyoun Gone Mad?" "Desperate, Kinyoun Commits Another Outrage on San Francisco," "Board of Health for Graft and Plunder," "Our Bubonic State Board." These indignities and misrepresentations were thrust upon men who were fighting to protect the health and lives of the people of their city, state and our nation. After a year's brave fight in the face of physical danger and the malicious efforts to blacken the record of a faithful and honest public servant, Kinyoun of the United States Marine Hospital Service, resigned. There isn't time nor space to give you the rest of this plague history, how it cropped out in other parts of California, how it was shipped to

Matanza and all but ruined that town, how the local board of health in the face of the opposition of the governor of the state and other opposition, stuck to their guns and won in the fight, for San Francisco finally admitted the presence of the plague and asked for governmental aid. Rupert Blue, one of the best surgeons of the Marine Hospital Service, was assigned to the terrified city, and while he has not been able to wipe out the pestilence completely, the fact that smouldering danger has not broken into a devastating flame is due largely to his unremitting watchfulness and unhampered authority. "Business interests," at the risk of the lives of the people, have had their trial in San Francisco, and "San Francisco has had enough of 'suppression,' "—suppression of the truth of its health conditions. The truth has been told about the bubonic plague for many months past in the public health reports of California, and the true facts have not been denied by the newspapers. Little is heard or said about it now. This is an instance of an attempt and failure of a state to supervise important health interests of its people.

In reference to this important matter of national supervision of public health, Hon. David D. Armond, our representative, says: "There are difficulties in the way, one largely to our constitutional limitations. It is almost impossible to amend our constitution unless by resort to a constitutional convention. For years I have been in favor of such a convention but the public does not appear to awaken to the importance of moving on this line. I shall do what I can for the constitutional convention, also what I can for good legislation for public health within present constitutional limitations. I consider the matter of prime importance." Harrington says in reference to our pure food law: "In the sacred name of commerce Congress enacted, about a year ago, what is called a pure food law. Having no authority to encroach upon state police powers it held that it could not enact health laws, but under its delegated right to legislate concerning commerce, the desired law was passed as one relating to interstate commerce, not essentially as a pure food law, but as a law against commercial fraud." To this extent it seems that our national government is hampered, on account of constitutional limitations, in this matter of protecting the health and lives of our people. The great purpose in placing these facts before you is to arouse public interest in this matter and to create such a strong public sentiment in favor of a national public health service that Congress will enact the necessary legislation for the establishment of a national bureau of health at Washington with power and funds to carry on this highly important work of properly supervising the health interests of the people of our nation.

In behalf of the members of the Vernon County Medical Society and the Hodgen District Medical Society, under whose auspices we have been permitted to present to you these facts this evening, we desire to add that the great secret of success of this movement lies with the people. Physicians and legislators cannot solve these great public health problems

without public opinion. Public sentiment must be the moving power behind this work. Our legislators are simply the agents of the people they represent, and not until the people themselves realize the necessity of this movement and demand protection of health and life, along the lines suggested, will this work ever be done. Physicians, sanitarians, hygienists and political economists can give directions, attorneys can assist in formulating bills, our legislators can enact laws, but public sentiment must be the power behind all these to move our nation to action. Besides, no law can be made effective without public sentiment behind it. The sovereign power of our nation is the will of the people; as they will to do, so it shall be done. We, as physicians, are fulfilling our duty in pointing out the way, and when this work of education along these lines is completed the responsibility of the success of this movement will then rest with the popular will of the people of our nation.

Before concluding I desire to read to you some of the comments of the public press and of some of our statesmen on this matter in order to give you some idea of the popularity of this public health movement:

"Here's good luck." *(Chicago Inter Ocean.)*

"A movement of great importance." *(Evansville Courier.)*

"Now let the good work go on." *(San Antonio Express.)*

"It is surprising that such a movement should have been so long delayed." *(Christian Herald.)*

"It will have the hearty coöperation of every intelligent man and woman." *(Ohio Farmer.)*

"100 of the best known men in the country." *(New Haven Register.)*

"The states' right argument should not prevail against it." *(Evening Union,* Springfield, Mass.)

"Is there another movement that has claims upon the interest and support of all good people quite equal to this?" *(Buffalo Express.)*

"I am in complete sympathy with the aims and purposes of this organization." *(Grover Cleveland.)*

"The American Health League is certainly to be congratulated on its progress and recognition. It is through such enlistment of public interest that Congress may be expected to enact the legislation necessary to enlarge the activities of the federal government in respect to public health. I hope to live to see the time when the increased efficiency in public health service, federal, state, and municipal, will show itself in a greatly reduced death rate." *(William H. Taft.)*

"I am deeply interested in the work your organization has in hand." *(William Jennings Bryan.)*

"The preservation of national vigor should be a matter of patriotism." *(President Roosevelt.)*

"We favor that a national organization of public health be created for the protection of human life." *(Delaware Republican Platform.)*

"We advocate the centralization of existing health agencies into a national department of health." *(Ohio Republican Platform.)*

"Be it resolved that Congress of the United States be and is hereby memoralized and urged to create and establish a national bureau of health and endow it with the power and funds commensurate with the highly important duties with which it will necessarily be entrusted." *(Ohio State Legislature.)*

"We commend the efforts designed to secure greater efficiency in national public health agencies and favor such legislation as will effect this purpose." *(Health Plank from the Republican National Platform.)*

"We advocate the organization of all existing national public health agencies into a bureau of health, with such power over sanitary conditions connected with factories, mines, tenements, child labor, and other such subjects as are properly within the jurisdiction of the federal government and which do not interfere with the power of states controlling public health agencies." *(Health Plank from the Democratic National Platform.)*

We found nothing on public health in the Republication platform of Missouri, and nothing on this important matter in the Democratic platform of our state. This is not a political question, not a party issue, but a question which should interest all people and all parties of our land. It is of too great a vital interest to the people of our state and nation to have been left out of the platforms of any political party. In reference to our state, Governor Hadley said: "I intend between now and the opening of the legislature to have conferences with the members of the board of health and other physicians as to what our state can and should do to further the movement for the prevention of the spread and stamping out of contagious and infectious diseases."

In addition to the endorsements mentioned many others have been received by the committee of one hundred. Some of them from foreign countries, England, Canada, and Australia. A Melbourne contemporary gives a column and a half of editorial matter commending this movement and suggests that a similar one be inaugurated in Australia.

If there ever was a time in the history of our nation when a campaign of education along this line of work presented such imperative demands, it is now. To disseminate this knowledge broadcast over our land we need the help of the public press, the pulpit, platform, our schools, medical organizations, and other organizations and the people in general until a wave of public sentiment spreads across our nation from ocean to ocean, demanding national protection of health and life.

We believe we are safe in saying that as soon as a universal comprehension of this important matter is brought about by the work of enlightening the public along these lines that these necessary health reforms will follow.

SOME MISLEADING CONCEPTIONS IN THE TREATMENT OF APPENDICITIS.*

By H. C. Crowell, M. D., Kansas City, Mo.

The result of years in observation and practice should serve us in arriving at an approximately correct conception of the condition under consideration, irrespective of what may have been taught. Indeed, we are inclined to the opinion that methods and conclusions are often offered to the profession, and soon incorporated into our text books, before they have been thoroughly tried out. Often, it would seem that about the only recommendation the idea possesses is that it emanates from one enjoying standing and reputation in the profession, a requisite very much to be desired and yet not necessarily excluding error. We submit that trial and experimentation on the part of the many for a considerable length of time, is the best test of the practicability of any device, method or conclusion, which is placed in the hands of the many for general adoption. A conclusion may be correct in principle and yet faulty in application by some.

That the subject of appendicitis has been exhaustively considered will probably be conceded, and may require an apology from one contemplating further observation. So long as we are yet compelled to record numerous fatalities we must continue to analyze our methods and conception of the malady.

The fatalities which we have observed and the methods employed have collectively given rise to this protest, if such it shall be considered:

First: We feel that a misleading thought is encouraged when it is suggested that we be governed by time and not conditions in dealing with appendicitis. At least, it seems that much teaching would make the condition secondary to a consideration in hours or days, a position which experience teaches us is pernicious. Not to operate, if not before 24 hours, has taken a strong hold upon those inclined to procrastinate to see if recovery may not take place in spite of the treatment instituted,—usually a brisk cathartic, the very thing which all are agreed should not be done. At this juncture we should agree that the only treatment of appendicitis is surgical. Too many instances of advanced destructive conditions have been found at very early periods, even with a lack of the symptomatology to indicate the condition, to justify the employment of hours, which shall determine whether active measures are to be extended or withheld.

*Read before the Jackson County Medical Society, November 17, 1908.

To say, if not seen within the first 24 or 48 hours, we will not operate or should not, is or may be dangerous teaching. The result of such teaching has been to stimulate the natural inclination to defer a serious proposition to a time when it may become more so.

It has also served to give to those who do not operate the assurance that they are justified in such delay. The suggestion of Ochsner to wait if not operated early, restricting food and liquids by the mouth, is most excellent in well selected cases and under his or good surgical observation, in non-suppurative cases.

In just the latter statement lies the efficacy or safety of the procedure, for we deem it a time for greater surgical judgment than is required to do the work of an early operation.

Here the decision adopting such a course generally falls, or is most often assumed by those of limited surgical experience or is often but imperfectly carried out or carried on to the end that surgery which might have been successfully employed, is defeated.

The allurements held out as a result of such treatment have been so ideal and flattering that it has been quite universally adopted with an undoubted large mortality, not because of an altogether wrong principle, but frequently from the lack of ability to exercise that discriminating judgment that comes only to those of large and varied surgical experience.

If the Ochsner plan is to be employed, we should advise it in conjunction with the most careful surgical association, together with a frequent leucocyte count which may indicate the progress or recession of the disease in the earliest history but which becomes of less value the farther we get from the acute stage.

After a considerable experience with these cases of appendicitis in all stages and after observing attempts to reach the interval stage on the part of many physicians with failure in nearly all instances, save those that recover from their mildness, I am strongly impressed that it would be a life saving measure could that teaching which encourages delay be retracted, and every physician come to realize that no one can tell when a given case will go on in a mild form or soon take on very grave conditions. Far better in our judgment would it be were we to teach but *one* thought, namely, that *an operation is indicated as soon as a diagnosis can be made* and which *is* made, without much doubt, early, the *most favorable time* for interference.

If, however, an operation is not done early it should in no wise suggest delay based on hours or days; if delayed at all, the delay should be based upon the best of surgical judgment, which would be less dangerous than delay.

We recognize in making these adversions that we are not bringing forth anything new, but attempting to effect a more careful consideration of these few propositions, if possible, before we adopt them in the

light of our present knowledge relative to the history of appendicitis cases.

Dieulafoy says, "that no one should die of appendicitis." Whatever position we may hold in regard to the course to pursue, in order that we shall hold the same opinion as Dieulafoy, which we are disposed to regard as correct, we must make an early diagnosis and operate early. There should be no excuse on the part of the physician for not doing so. If such a course is not pursued it should be due to the patient's or his friends' attitude alone. In order that those objections shall cease to obtain the profession should be united and take a firm stand for early operation, when success will be universal,—the most convincing argument attainable with the laity.

The reasons for an early operation, irrespective of hours as set forth in italics in Kelly's work on appendicitis, should ever be borne in mind by those who first see the cases early:

"It is safest."

"The operation is more easily done."

"The patient is spared days of suffering."

"The liability to recurrent attacks is obviated."

"An early operation obviates the risk of hernia."

At the present writing it will be a unique circumstance for a patient to be caught a long distance from one of experience capable of doing an early operation. In the late cases the requirements on the part of the surgeon are quite different. Here, he should be capable of any intra-abdominal procedure, exercising the very best surgical judgment to avert failure and establish confidence in surgical interventions in general.

The surgeon who happens to be called to a late case has many conditions to consider more than the mere mechanical performance of the work of opening the abdomen, removing pus, appendix, etc. He must contemplate the extension of an infection, possibly localized peritonitis that may easily become general by the spread of the infection. The adhesions in which lies the safety of the patient may also be the cause of death from obstruction. Perforation may be one of the complications rendering even good surgical work in late cases futile. Any considerable disturbance of any kind in really bad cases may produce death, as may, more frequently, delay or an attempt to reach the desired period of safety, which has proven so alluring. If we are caught in these aggravated cases we are impressed with the Murphy idea, that the toxins are the factors to be feared and disturbed as little as possible, but that some sort of drainage is essential, even though slight; that it can and should be made quickly, allowing the pus to seek a lesser resistance though it may be slowly yet quite safely.

Too much surgery is as bad as too little, but timely surgery properly done is at all times unassailable.

212 Rialto Building.

REPORT OF A CASE OF INVERSION OF THE UTERUS, WITH EXPULSION OF A LARGE NECROTIC MYOMA.*

By Frank Hinchey, M. D., St. Louis, Mo.

This case is of special interest because it is an uncommon one, because of involvement of the bladder in the uterine hernia, a condition generally denied, and because of the futility of all the measures of treatment, which were adopted, thus incidentally illustrating how rapidly a patient may die from a complication of fibromyoma.

The patient, Mrs. M., was 38 years of age when I first saw her, in September, 1907.

Family history entirely negative as to any tuberculosis or cancer.

Previous condition: General health very good, prior to onset of present trouble. Has borne two children, and has had two abortions prior to birth of last child, nine years ago. Menses regular, four or five days duration, no pain and no clots.

Present trouble: For about a year the menstrual flow has increased in amount and duration, lasting from six to ten days. For four or five months she has had an intermenstrual discharge of a watery nature, which, during the past three months has become very foul and at times blood-stained. About the same time she was told that she was getting pale and yellowish. She ascribed these changes to an early onset of the menopause. Has thought she noticed a lump in the lower abdomen, but having always been very fat and never disposed to giving her physical condition much attention, this was also ascribed to the "menopause." For a month past the discharge has greatly increased and she has been unable to urinate except in the standing posture. During this time she began to have pain in the lower abdomen, of a bearing-down nature, which was the first experience of pain during all her illness. Three days before I saw her these pains caused so much distress that her family physician was forced to administer morphine at regular intervals.

Present condition: She is of large frame, 5 feet, 8 inches, weight 200 pounds. Temperature 97.6, pulse 96, small and intermitting. Complains of thirst, insomnia, weakness and dull pain in lower abdomen. There is marked anemia of the mucous membranes, yellowish skin, white sclerotics and tongue pale and flabby. The abdomen is very fat, with navel depression of about one and one-half inches, and contains a large, firm mass, extending, in the median line from pubis to two inches above the umbilicus, and laterally assuming the general contour of a pregnant uterus, producing considerable bulging of the abdominal wall. No fluc-

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tuation. No pain on pressure except over hypogastrium. The perineal region was slightly edematous and the mucous membrane of the vagina markedly anemic. The entire vagina was filled with a globular mass of firm consistency, resembling tense, muscular tissue and not in the least nodular. This mass was about the size of the foetal head at term, and, resting well upon the pelvic floor, was free of all attachment to the vaginal walls, though only with difficulty could the finger sweep around it. It was covered with a movable membrane or capsule, which, on retracting the labia, was seen to be bluish-black, with areas of superficial necrosis. The cervix or anything resembling that organ, could not be reached. The meatus was drawn high up against the pubis and so compressed that it was not possible to enter a hard catheter. On manipulation, with the patient in the upright or knee-chest positions, a free, foul, watery discharge came from the upper portion of the uterus over the sides of the tumor. While the mass was slightly movable it was not possible to replace it in the uterus.

Diagnosis: Necrosis of fibroma with possible sarcomatous degeneration of upper areas. This supposition was based on the apparently rapid recent extension of the tumor and the odor, amount and character of the discharge, which seemed so dissimilar from other sloughing fibroid tumors we had observed.

The following day she was removed to a hospital, where urinalysis of cloudy, ammoniacal urine showed abundance of bladder epithelium, mucus, blood cells and hyaline casts.

Treatment proposed: In our inability to reach the cervix, and as the tumor extended above the umbilicus, it was believed to be attached high up in the uterus, with an edematous prolongation which had dilated the cervix, and that the portion below the cervical constriction alone was necrotic. On this theory we hoped to deliver the portion below the cervix, transfix and ligate it, then, after excising that portion and cleansing the vagina, we hoped, with morphine and by vaginal tamponade, to delay further delivery until the condition of the patient could be improved, for the violent expulsive pains had caused great exhaustion and loss of sleep. With such hoped-for improvement, we expected to close the cervical canal and to remove the tumor by laparotomy.

On arriving at the hospital she was placed in the operating room. Morphine and atropine, followed by ether were administered to overcome the intense pain. Obstetrical forceps were applied about the mass and, on making traction, the blades penetrated deeply into the soft muscular tissues, which were arranged in longitudinal bundles, interposed between planes of fascia, there being no nodular areas. Large portions were excised, without exciting hemorrhage of any consequence, and the hand passed into the vagina. At the pelvic brim, by careful palpation, the very thin border of the completely dilated cervix could be determined, blending with the vaginal wall. An effort was made to pass the hand high into the uterus, hoping to completely separate the basal attachment and to de-

liver at once, but the firm contraction of the uterus and the size of the tumor prevented this. We believed this maneuver expedient because, in the absence of active hemorrhage and the absence of cervical constriction producing the partial necrosis we had anticipated, we were assured that the entire tumor was necrotic and had but little basal attachment. Her condition prohibited further efforts and, after tamponade of the vagina, she was put to bed with a bad pulse. Under repeated hypodermoclyses and forced feeding she rallied very nicely, but, as was to be expected, the expulsive pains did not abate, and there was a constant loss of serum and scanty urinary secretion.

During the following two days her temperature ranged from 100 to 101.5, and our efforts were directed to stimulating her and aiding the uterus to expel the necrotic mass, for all radical measures seemed contraindicated. We could only excise the expelled portions, as they were delivered, because the tissues tore when traction was made, and the foul condition of the vagina prohibited any attempt at vaginal hysterectomy, even when the greater part of the tumor was delivered.

Finally, on the morning of the fourth day, a large mass was extruded beside the perineal pad and above the mass appeared a constricted area, beyond which was found the tissue of what was regarded as the uterus. There was some doubt, because the bearing-down, labor-like pains continued and the fatty abdominal wall, with sensitive bladder area (due to cystitis), prevented diagnostic aid from that direction. A transfixing ligature was placed below the constriction and the mass excised. The tissue above the constriction was of a dull red color, globular in shape and bled upon being pricked. It completely filled the vagina. The examining finger could feel no constricting cervix. The anterior wall of the vagina seemed obliterated, being tensely drawn against the uterus, while posteriorly the tense sacro-uterine ligaments were palpable. There was no hemorrhage. The patient presented the symptoms of marked collapse. Still there was no vomiting, she was conscious most of the time and aside from the pain, complained of thirst, despite the unlimited stimulation and drink permitted her. The expulsive pains continued during the day, and were no doubt due to contraction of the cervix, for, in making manual attempts at replacement, at various times, it was observed that the distal, or cervical, portion of the uterus became more dense and constricted. She died that night.

At the post-mortem examination we were permitted to remove only the organs causing the foul odor, hence unfortunately know nothing of the condition of the kidneys or heart. We removed the bladder with the uterus and the remnant of tumor, which grew from a broad base, involving the entire fundus of the uterus. The specimen shows the entire cervix has been inverted, with the cervical attachment of the bladder drawn into the funnel, both tubes entirely out of view and the ovaries appearing at the top of the constriction of the inner os. The outer os is more dilated than the inner, and the tissues of the former spread out over

the vestibule, leaving a short space intervening between the meatus urinarius. Posteriorly the sacro-uterine ligaments are tightly stretched, so that the rectum dipped over the posterior edge of the funnel. We considered this extreme type of complete inversion a rare condition and one of much importance, because of the unusual danger of injury to the bladder or rectum during any vaginal operative treatment. The bladder showed marked inflammatory changes with areas of recent erosions, which accounted for the localized pain.

Microscopic examination by Doctor Guthrie McConnel showed necrosis of fibromyoma.

This case presents for consideration, first, the still-mooted question of the propriety of operating upon fibroid, uterine tumors before they develop symptoms of an urgent or threatening nature; and second, the relief of inversion of the uterus. These questions are too important to receive proper discussion in the limited time at my disposal, and I simply wish to touch briefly upon such facts, concerning these questions, which the study of this case have brought to my notice.

Until comparatively recent years it had been the accepted belief of most medical men that such tumors were not to be operated upon until they produced symptoms dangerous to life. Despite the immense educational labors of such men as Bland-Sutton, Noble, Martin, Baldy and a host of others this belief still prevails to a great extent. The case just cited simply shows how a woman can die in a week after such symptoms have appeared, for she believed her ailment of no great consequence, since it did not prevent her from doing her work. The dilatation of the cervix by the pendulous portion was apparently a slow and painless process, and she felt she needed no treatment until annoyed by the expulsive pains, due to the beginning inversion.

When we make a diagnosis of fibroid tumor we should inform our patient. If the tumor is small and causing no menorrhagia, it may be quite safe to have her report, as G. Brown Miller has suggested, every few months, for careful examination. When menorrhagia is excessive operation should not be deferred, for we now know that when this condition has persisted for some time changes in the cardio-vascular system, of a lasting nature, are produced, in a manner not yet understood. So that a late removal of the growth, in advanced cases, will not be followed by recovery of the heart, kidneys and liver from their degenerative changes.

Concerning the menopause, Noble has observed no instance of disappearance after the menopause or pregnancy. And Bland-Sutton says they commonly become septic after the menopause. Tracy, in a recent study of 3,561 cases, states that degenerations occur in about 65 per cent of these cases after the menopause.

These facts answer for us the question of early operation. Where symptoms of distress occur there can be no question.

Concerning the treatment of inversion of the uterus, my observation of this case affords some points of interest, especially since inversion is not so rare in private practice as one would suppose from the reports of the large maternity hospitals, in which from 100,000 to 250,000 cases of delivery occur without an inversion. From my observation of the mortuary reports of St. Louis and of the literature, these cases are not so infrequent, and deaths from this cause will continue until ignorant midwives and the like cease to hasten the third stage of labor by traction on the cord, or by faulty application of Crede's technique. When this accident occurs a fair effort at replacement should be made, by intelligent manipulation and moderate pressure in the direction of the axis of the birth-canal. I do not believe we are justified in working an hour or more, as some have done, to overcome the constriction of the cervix. We only add to the shock, hemorrhage and infection, for if there is sufficient dilatability a fair effort will show progress at once; and, as in the case above cited, where the cervix has firmly contracted, force is of no avail. To establish this to my own satisfaction, at the postmortem before rigor mortis had occurred, and while the organs were yet warm, I found replacement not possible when extreme force was exerted with one hand on the fundus, in the vagina, and the other, in the abdomen, making counterpressure against the edges of the funnel. Indeed the use of powerful dilators did not materially influence the constriction. It would seem that these acute cases could be treated best by laparotomy, after a short effort from below, for there is not sufficient room for the performance of the various vaginal operations, which aim at opening the anterior or posterior vaginal vault. These vaginal operations should be reserved for the treatment of cases of chronic, partial inversion, where involution has made the organ sufficiently small to permit exposure of the site of the incision. When the inversion is complete, with the bladder drawn into the funnel and the anterior vaginal vault practically obliterated, the operation of anteriorcolpohysterotomy (Spinelli) would not be possible. Under like condition, Kuestner's method of opening the cul de sac is dangerous, and there remains only his modification of this method, which is to incise the posterior uterine wall, sufficiently to effect replacement, after which the incision is sewed up. This is not a simple procedure and certainly not permissable in an infected vagina.

I make these statements because several text books and authors of monographs speak of the ease of the treatment of inversion, by the vaginal route, without distinction as to acuteness or chronicity; though the cases they cite are not acute and the description of the technic shows the bladder was not involved.

I may add that Tate's method of inserting the index finger of one hand in the bladder, through the urethra, and two fingers of the other hand in the rectum to exert counterpressure on the edges of the funnel, while the thumbs pressed upon the fundus, was considered but not attempted, because of the retraction of the urethra.

THE PHYSICIAN'S RELATION TO THE PHARMACIST, PRACTICALLY CONSIDERED.*

By J. L. Ormsbee, M. D., Springfield, Mo.

Whenever a person speaks on any subject from a practical standpoint, his listeners immediately think, "well what practical experience has he had in that line and what reliance can I place on what he says," so a short explanation is necessary.

Twenty years ago when the writer started to study medicine, the resolve was made to study pharmacy at the same time, and during the first year's reading with a physician, who owned a drug store, when the writer would become tired of reading Gray's Anatomy, he would go into the store and assist, and this method was continued during the time he studied medicine.

When the writer graduated in medicine he was practically better qualified to run a drug store than he was to practice medicine, and so the first year's work was in a drug store in both city and country, and ever since that time the writer has been closely identified with the practice of medicine as well as the practice of pharmacy, hence the title of this paper.

The average physician has a fair education, is a college graduate in medicine, and spends considerable time in reading scientific works and studying his cases, while the average pharmacist may have a fair education, is not a college graduate in pharmacy, and spends little if any time in reading scientific works or in studying theoretical pharmacy, as his reading is devoted to the drug journals which tell him how to make a greater profit upon the goods that he has to sell.

It takes several times as much theoretical study and work to obtain a physician's license in Missouri as it does to obtain a pharmacist's license, so to start with, in an educational or professional way, there is much difference between the physician and pharmacist; one might say by way of illustration, the physician is 75 per cent professional and 25 per cent business, while the pharmacist is 25 per cent professional and 75 per cent business, and this comparison is not far from right, but may vary in different localities.

The physician and the pharmacist see each other's work and business methods in a different way from what they really are, unless they have had practical experience in each calling, and herein lies the most common source of trouble between them, for the more they know about the work that each one tries to do the better their business relations will

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be, and as all of you know what the physician's ideas and methods are it will be useless for me to tell you.

The best rule to follow is, "physicians do unto pharmacists as you would have the pharmacists do unto you," and the way to do this is to come together and talk matters over as we do in this medical association.

As we know that medicine is not an exact science, and this is especially so in the preparation and application of remedies for the relief of diseased conditions, familiarity among persons of practically the same calling induces confidence, and we honor a man not so much for what he may appear to know, as we do for the gentlemanly way in which he treats us.

Nothing creates in a druggist a feeling of antagonism and dislike or an unwillingness to assist a doctor as quickly as an "overbearing, bossy way" that will have a tendency to make the observing customer think that the druggist does not know how, or is not treating him fairly, and the doctor is even quicker to notice and feel this same kind of treatment from the druggist, for public opinion and confidence is what make business for both and a lessening of these lessens the business.

No doctor who has not had actual experience both as a doctor and as a druggist can realize how much a competent and tactful druggist who has the good will and confidence of his customers, can assist or work against a doctor.

When a person feels indisposed or sick he usually goes first to the drug store and procures some simple remedy which he has tried before or some of his friends have recommended, and in the majority of cases asks the druggist what to use, and his opinion, if he is the right kind of a man, is valuable to them either in procuring the proper remedy or in realizing the fact that no simple remedy will do and that he had better consult a physician.

In many cases the druggist is asked about the physician and you can hardly expect him to suggest one who does not treat him fairly or one by whom he would be liable to lose his customer's trade.

Perhaps the things that cause the greatest amount of trouble between physicians and pharmacists, are dispensing by the physician and counterprescribing or refilling by the pharmacist, and in all of these the motive is one of gain.

The physician has a right to dispense his own medicine, the pharmacist has a right to counterprescribe providing he does it gratuitously, and any pharmacist can compound any recipe or prescription that he may have in his possession, providing he does not use the physician's name in connection with it or can legally sell it without the physician's order.

So you can readily see that these things must be agreed upon by mutual consent and when one talks of forcing things, it only creates

enmity and hard-feelings and makes the other try to make more money by doing these things that may cause trouble.

Almost any person can do the duties connected with his business in a more satisfactory manner than any one else can do the work for him, but the time the physician would use in attending to his horse and buggy, dispensing his medicines, etc., can be spent much more profitably in reading or studying about his cases or in attending to the more important details of his business.

The best and most successful business men devote their time to the most important details of their business and the most successful physicians having the largest practice do the same way; in some localities where competent and trustworthy pharmacists are not convenient, it may become necessary for a physician to dispense his own medicines.

Another objection to dispensing is the liability to mistakes in trying to do so many things at once; a competent druggist in filling your prescriptions is required by law to see that the medicine is not given in poisonous doses and this relieves you of a certain amount of responsibility.

This dispensing by the doctor makes him an active competitor with the druggist with all of the attendant results of being taken advantage of at every opportunity.

Counterprescribing by the druggist is largely an out-growth of a feeling that the dispensing doctor is selling medicines the sale of which rightfully belongs to the druggist, and a desire of the public to avoid the expense of a doctor as long as possible.

It is a well known fact that in medicine, as well as in many other things, "a little knowledge is a dangerous thing," and this is especially so in the drug business; the better class of druggists, or those who know the most about the medicines that they handle, know that patent and proprietary medicines will not always do what their makers claim for them and the nice talk is made to create a sale for the medicine and not especially for its medicinal value, so when asked say, "I know nothing about these preparations" Thus one avoids all needless responsibility, and while they may miss a sale by telling the truth they gain the customer's confidence and in the end will be able to sell him anything he wants in their line.

Honesty is the best policy, and you cannot secure the greatest amount of satisfaction or do your best in the practice of medicine unless you treat your associates and assistants in an honest and straightforward manner.

A word in regard to the needless writing of prescripitons for medicinal preparations that require a physician's prescription before the druggist can legally sell them. This is a degrading practice for both doctor and druggist and experience has shown that there is not enough

in it to pay for the worry and anxiety it usually causes both the doctor and druggist who does it, so do not do it.

The best and most satisfactory way to settle all differences is by mutual agreement, and this can only be done when both parties that are concerned are willing to assist.

Both the doctor and the druggist are much more willing to overlook the faults of, and assist any person whom they consider honest, competent and trustworthy, and this fact can only be found out in each particular instance by becoming better acquainted with these persons in a business or social way, and this, according to my experience, is the right way to settle all differences between physicians and pharmacists.

THERAPEUTICS.*

By W. A. McKelvey, Minden Mines, Mo.

In order to discuss any subject intelligently, we must first agree upon a definition, for the reason that, through common usage, we often forget or altogether overlook the full limitations of some terms. When we speak of therapeutics our first thought is of the use of drugs which, although one of the principal therapeutic agents, is only one out of many. Any definition, therefore, limiting us to the use of drugs only would be very deficient and come short of the scope indicated by this paper. In referring to authority we find that therapeutics is defined as that branch of medicine which treats of the application of remedies for the relief of pain and cure of disease, including all that relates to the science and art of healing not only the application of medicines, but all other agents which may assist in accomplishing the same result. In tracing the origin of the term we find it is derived from a Greek word, meaning, "to attend upon," "to cure." Therapeutics, therefore, in the full and practical application of the term, embraces every agent that has been applied and every method that has been employed for the relief of pain and cure of disease, from the magical incantations practiced by the priests of Egypt down to the latest, most scientific and extensive laboratory manipulations in ascertaining the opsonic indices and the therapeutic application of vaccines. No definition, however, of therapeutics in the abstract can throw any light of practical value upon this subject. Before we can intelligently discuss any therapeutic measure we need to recur to first principles and agree upon fundamental definitions. Before we can intelligently prescribe, we must be able to diagnose. Before we can detect the abnormal, we must be familiar with the normal. For the reason that mistakes all along the line are ultimately attributed to therapeutics, the history of our country is to-day replete with lamentations concerning the worthlessness of medical treatment, while the bulk of our medical literature, more from tradition and mere habit than from real belief or a sense of propriety, is based upon the ancient and mythological assumption that disease is an individual entity, a vague something, endowed with relentless malice, with power and volition, so that it can attack and may be attacked, be aggravated and appeased, can vanquish and be vanquished. In other words, judging from the current phraseology of medical writing, disease, like the now obsolete idea of the devil, is a sort of pathological lion, forever roaring in the frightened ears of mankind, seeking whom he may devour. This conception of the nature of disease, not now

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literally admitted by any intelligent mind, like the theory of a personal devil, was born of the same superstition which gave us all the various systems of mythology; and while we practically ignore and discard it, our literature is still permeated by its weird and meaningless phraseology, and this has led us into a very labyrinth of therapeutic sophistry.

We say, our patient was attacked with grippe; that he succumbed to a violent onset of pneumonia, or that the disease left the joints and attacked the heart. Probably very few medical men of the present day are misled by this senseless phraseology, but its persistent and almost universal use cannot but result in correspondingly erroneous therapeutic deductions.

If we look upon disease as a physiological inharmony, caused by the presence within or the effect of contact without of incompatible and hurtful elements or forces, and direct our efforts to the removal of retained or morbific elements, and to interrupt the action of injurious forces, then our treatment is rational and helpful; otherwise, blindly combating symptoms, it may be either negative or positively mischievous and inane. Notwithstanding what has been said to the contrary, I am persuaded that many of our failures in therapeutics are due to an imperfect or erroneous conception of disease, and before we can hope for more light along this line we must recur to the fundamental defects—those of pathology and physiology. With a correct idea of physiopathogeny we are now able to study therapeutics. If then, we find it is true that disease is not a conscious entity, an intelligent spirit of evil, it follows that all mysterious methods of attempting to exorcise it are irrational, for the reason that they make no question of original cause. In the light of recent pathological investigation and with the aid of a modicum of medical logic, it will be apparent to the dullest intellect, that fever is not a disease *per se;* that it is the normal result of vital action struggling to overcome the inharmony and to abate its results,—a result of nature's struggles to throw off some morbific agent. To stifle it without removing the cause is almost invariably done by the unstinted use of some of the so-called antipyretics with which the pharmaceutical market is flooded,—some bad, others worse, all dangerous. The use of such antipyretics not only does not cure disease, but it directly opposes nature's efforts by checking the eliminative processes. Theorize all you wish about the effect upon the mysterious, if not hypothetical, trophic centers and the equally little understood vasomotor reactions, but in the meantime do not spare hydropathic measures in treating fever. Other symptoms which are too often combated without taking into consideration the fundamental causes, are cough, vomiting and diarrhoea. Nature's efforts to expel some poison which, if retained in the system, may cause death, is too often checked by the use of opiates. When a foreign body gets into the eye and sets up an irritation, what takes place? Lachrymation. Why? This is nature's effort to remove the foreign body by washing the eye. When called upon to treat such a case why

not direct your treatment towards checking the lachrymal secretions? This would be combating the symptoms and as rational as giving the antipyretics referred to in fever, or opiates to relieve vomiting and diarrhoea. It must be admitted that too much of our medical treatment consists in pseudo-scientific effort to silence symptoms and obtund morbid sensibilities, and in this way progress in treatment has been greatly hampered. While cautioning against interfering with nature's processes, do not understand me to say nature's efforts are equal to all emergencies and that the application of drugs is useless—far from it. Nature's efforts are often too slow and sometimes altogether inadequate, where drugs, judiciously selected, are of unquestionable efficacy. This is, however, assisting, not combating nature's efforts in getting rid of something injurious. While during the past decade numerous investigators have labored diligently to place therapeutics upon a more rational basis, none, perhaps, is more worthy of mention than Sajous, whose discoveries in connection with the ductless glands, so beautifully elucidated in his works on internal secretions, if they stand the crucial test of time and clinical experience, promise in part to revolutionize the practice of medicine and establish the rationale of sero-theraphy, or perhaps, establish *immunimizing medication as the foundation of rational therapeutics.* If it be true that the adrenals, the thyroid and the pituitary body, the principal functions of which have hitherto been unknown, play so important a rôle in the body physiology, we need not wonder at some of the lamentations concerning the shortcomings of medical treatment among the leading members of the profession, neither be surprised at the therapeutic impetus such discoveries will impart. If it be true that the function of the adrenals is to supply a secretion which, passing through the lungs, takes up the oxygen therein and distributes it to all cells, and that tissue respiration and cellular life are thus accounted for, the value of the therapeutic deductions will be evident—that, if we are able, with our remedies, (which will be referred to later) to govern the adrenals—"the oxygenation of all cells, we can assist the life process itself where its activity its subnormal." If, further, the function of the thyroid gland is to secrete a substance, thyroidase (Wright's opsonin which has been receiving so much attention of late), the function of which is to sensitize bacteria and render them vulnerable to attacks of phagocytes, and if we are able, with our remedies, as has been demonstrated, to increase the activity of this gland, the therapeutic value is likewise obvious. During the past decade, antitoxin has been so universally used in the treatment of diphtheria, that few if any doubt its efficacy in lowering the mortality in that disease. The source of this antitoxin in the blood of the animal from which it was taken, however, was unknown. Its use, therefore, has been empirical. If it is true, then, that this antitoxin is, "(1) the oxygenized adrenal secretion, (2) a ferment derived from the pancreas, (3) a body rich in phosphorus derived from the leucocytes, and

(4) the thyroid secretion—" (thyroidase), (opsonin), then the adrenals, pancreas, leucocytes and thyroid prove to be the source of antitoxin.

If, then, with the use of our remedies, we can increase the functional activity of these organs, can we not produce thyroidase (opsonin) to sensitize the bacteria, and auto-antitoxin to destroy them? Sajous describes all the diseases that are most fatal to mankind and claims that wherever cures had been effected by remedies it was through agents which by stimulating these organs, increased the blood's assets in auto-antitoxin; thus he lays the claims that *immunimizing medication is the foundation of rational therapeutics.* Admitting this much, how are we going to effect this stimulation? if it be true that the function of the pituitary body is to automatically control these secretions; that the adrenals are provided with a center in this body, and that this center is so sensitive that whenever any foreign substance, poison or drug, enters the circulation this test organ detects it and by its sympathetic nerve connection with the adrenals, these organs are stimulated to greater activity in consequence of which the amount of oxygenized secretions (adrenoxide) is increased, and this, in turn, stimulates the thyroid gland in consequence of which more (opsonin) (thyroidase) is supplied and thus the opsonic index is raised. With this increased proportion of oxyhemoglobin, general metabolism and nutrition are increased and nature's defensive agents prepared for attack of opposing armies. I might mention here again, that as the result of this increased activity we have *fever.* If time would permit, I would like to refer to the diagnostic importance of these internal secretions, the means of testing artificially the body fluids, or in other words, *ascertaining the opsonic index.* This, however, would require more time than I feel entitled to; so I will conclude my reference to this phase of my paper by saying that, while this new departure in therapeutics is based upon scientific deductions, as the result of analytic and synthetic reasoning, and upon discoveries of functions which seem to fill a gap in human physiology, and make it possible to account for numerous phenomena which different investigators have observed, but in the absence of such discoveries, could not be interpreted, yet, as far as the therapeutic application of vaccines is concerned, it must, at present, owing to the extremely difficult technique, remain in the hands of those specially skilled in laboratory manipulations. Until, therefore, some means is discovered of simplifying the methods, or until the profession generally becomes skilled in laboratory work, the diagnostic and therapeutic value of this new theory cannot be of general utility. For this reason it is liable to fall by the wayside, as history shows us has been the temporary fate of nearly all the valuable discoveries; but afterwards have been resuscitated and have contributed to the world's science most valuable truths.

In conclusion, I wish to say, notwithstanding some of the declarations of the leading members of the profession from the time of Dr. Oliver

Wendell Holmes who declared that "if all the drugs were thrown to the bottom of the sea, it would be that much better for mankind and all the worse for the fishes," down to a recent lecture delivered by Doctor Osler, when, to a class of medical students he declared that "he is the best doctor who knows best the worthlessness of most drugs," and while perhaps the treatment of disease, more than any other branch of medicine, has been influenced by superstition and tradition, it has been propelled by the same forces and equally orderly succession of events, to precisely the same standard of enlightenment as that of the collateral arts and sciences.

TUBERCULOUS ADENITIS OF THE MESENTERIC LYMPH-NODES.*

By Louis Rassieur, M. D., St. Louis, Mo.

In literature this subject is usually spoken of in conjunction with tuberculosis of some other organ. It is the object of this paper to accentuate the importance of the consideration of tuberculous adenitis of the Mesenteric Lymph-Nodes more specifically. With this end in view I have collected the cases thus treated in literature, and with my own cases, present them for your consideration.

This condition is found most frequently before puberty, especially during the first six years of life according to the statistics of Woodhead[1] and of W. S. Colman.[2]

Prof. G. Sims Woodhead[1] found tuberculous mesenteric glands in 78.7 per cent of necropsies on tuberculous children, and in 11 per cent the mesenteric was the only lesion present. W. S. Colman found them in 66 per cent of the necropsies. Dr. J. Walter Carr[3] in 54 per cent. Dr. W. P. S. Branson[4] in 22 per cent. Osler[5] says that tuberculous mesenteric glands found occasionally at post mortem, are common in children, the lesion which produced it having gotten well and disappeared. When this condition is present in adults, it is found to affect most frequently the glands of the appendix, or of the ileocecal region because, according to Dr. Corner:

1. The cecum is like the stomach, a resting place for the bowel contents in its passage.

2. The bowel contents contains a maximum number of organisms in the cecum.

3. The lymphoid tissue has its greatest development in the ileum, the cecum and especially the appendix.

Caseous or cretified lymph-nodes are not infrequently seen at appendectomies. Mesenteric lymph nodes rarely become abscessed. Theobald Smith[6] in his study of tubercle bacilli isolated from tuberculous mesenteric lymph-nodes taken from three cases of presumable food infection, found that they did not correspond to the bovine type of bacilli in any one particular, and that we must consider them as an infection with bacilli of strictly human origin. Demme[7] reports three cases of tuberculosis of intestines caused by feeding tuberculous food. Huterichs[8] reports similar cases of tuberculosis by feeding. Dr. Sidney H. C. Martin[9] fed guinea pigs with tuberculous sputum and saw infection of the mesenteric glands arise un-

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

preceded by any intestinal lesion. Colman[2] observed in nearly all cases of tuberculosis in children the most advanced tuberculous changes were found in the thoracic or mesenteric lymph-nodes often leading to their complete caseation before any tubercles could be found in the lungs or intestinal mucous membrane. Frederick Taylor[10] says that the nodes when caseated may rupture and cause peritonitis. Marsh[11] reports such cases. Dr. Pyxe Smith[12] also reports such cases. Dr. Corner[13] had a case where operation had been deferred and patient developed a general miliary tuberculosis. Dr. Branson[4] says: "Excepting only the bronchial glands caseation of the mesenteric glands is the most frequent promotor of tuberculous meningitis. The removal of these softened glands from the mesentery would remove a standing menace to life." Guthrie[14] says that in 41 cases of tuberculous peritonitis, three cases were caused by rupture of caseated mesenteris lymph-nodes. They were treated by medical means and all three came to exitus. He believes that caseous mesenteric lymph-nodes should be removed, since they are the chief source of fatal dissemination.

Colman[2] had one case which died with Addison's syndrome caused by pressure on the adrenals by large tuberculous nodes; in another case the nodes formed the chief part of an intussusception; in a third case the glands had ruptured and caused fatal peritonitis.

Rotch[15] says tuberculous peritonitis is most commonly secondary to tuberculosis of the mesenteric lymph-nodes. He has had cases make a complete recovery after removal of the caseous gland and continue well even after five and six years.

Dr. Branson[4] in the Transactions of the Royal Medical and Chirurgical Society, for 1905, says: "With regard to the diagnosis it may be almost laid down that hard movable tumors in the belly of a child which are not faecal are caseous mesenteric glands." The presence of Mesenteric Lymph-Nodes may be diagnosed by the tuberculin reaction according to Dodson.[16] The *x*-ray may prove a valuable diagnostic measure as shown in the first case reported by Dr. Corner.[13]

The symptoms in a general way are failing appetite, loss in weight and strength, colicky pains, intervals of accelerated pulse and slight increase of temperature; mucus may be present in stools with a tendency to diarrhea, rarely is blood present—symptoms of a functional nature—careful physical examination is usually negative except the finding of a movable tumor. A history of tuberculosis is noticeably absent.

A brief synopsis of the cases reported is as follows:

Dr. Collins[17] reported that a female, aged 25 years, clerk, had been complaining for 1½ years of malaise, slight acceleration of pulse and rise of temperature. She had a movable tumor size of a hen's egg 1½ inches below the umbilicus, in the middle line. The mass was removed. Intestine was resected. No drainage. Patient made a complete recovery. (She had no history of tuberculosis.)

Dr. Corner[13] reports the following cases:

Case 1. A man, age 41 years, had been ill for six months. He complained of urethral pain before, and pain in the groins after urination. The tip of the sacrum was so sensitive that he could not sit. Careful examination was negative. Several months later an X-ray picture showed a shadow opposite the third lumbar vertebra which might suggest renal calculus. Exploratory laparotomy revealed a thin atrophic appendix and in the mesentery opposite the third lumbar vertebra was found a caseous and cretified gland the size of a large walnut. Appendix was removed. The gland was incised, curretted, and obliterated with sutures. No drainage and no gut was resected. Patient made a complete recovery. He had no family or other history of tuberculosis.

Case 2. A boy, age 11 years, had a history of repeated attacks of appendicitis. There was no history of tuberculosis. He was operated upon. The lumen of appendix was obstructed. Numerous small glands were found in the mesentery of the small intestine. Appendix was excised. No drainage was used. Patient recovered.

Case 3. A boy, age 6 years, had a history of recurrent attacks of abdominal trouble without vomiting, but with jaundice. He had no history of tuberculosis. A mass, the size of a cricket ball could be felt in the region of the cecum. Operation revealed a large caseated gland with thickened walls adherent to the cecum, ascending and transverse colon. The abscess was opened and the greater part of the walls removed. The cavity extended up towards the root of the mesentery. Cavity was obliterated with silk suture. There was no bowel resected and no drainage used. Union was by first intention.

Case 4. A boy, aged 12 years, had been ill for 9 months with pains in the middle of the lower part of the abdomen. Bowels were inclined to be loose with a few streaks of blood occasionally. A tumor the size of an adult kidney could be felt in the left hypochondrium and loin. On operating the caseous glands were in part removed and in part incised and drained. No bowel was resected. Patient was improved, but still had occasional and unexplained attacks of diarrhea. There was no history of tuberculosis.

Case 5. A boy, aged 12 years, had been ill for several months with diarrhea, some signs of intussusception and some signs of meningitis. A tumor could be felt beneath the upper part of left rectus muscle. Abdomen was opened and the glands were in part excised and curretted. No drainage was used. No bowel was resected. There was no history of tuberculosis. Patient died after three weeks of tuberculous meningitis.

Dr. H. M. Sherman[18] reported the following case:

A patient with pseudo-hypertrophic muscular paralysis developed presumably intussusception. The bowels, however, yielded to enema. A rounded mass about 8 cm. in diameter could be felt in the abdomen just below the umbilicus. Operation revealed a large gland in the mesentery of the ileum close to the spine. The gland was excised with 53 cm.

of intestines. Murphy button was used. After a second operation patient got over her trouble. There was no history of tuberculosis.

Dr. R. Johnson[19] reports the following case:

A boy, 3½ years old, with a history of obstruction of the bowels for four days, was entered. He had a tumor below the left costal margin, in fact all the symptoms of intussusception except the discharge of blood or mucus from the bowels. Operation revealed several large glands from which an adhesion extended and constricted a bowel. The band was cut. Nothing more was done. Patient made a nice recovery. There was no history of tuberculosis.

Dr. Godlee[20] reports the following case:

Patient had acute intestinal obstruction with a tumor below right costal margin, evidently due to intussusception. Operation revealed a large caseous gland which by an adhesive band had obstructed. The band was severed and the gland was thoroughly scraped. Recovery was satisfactory.

Dr. Hegar[21] reports a case with a movable tumor in the hypogastrium which section proved to be a very much enlarged, cheesy and partially calcified mesenteric gland in the mesentery of the sigmoid flexure. The gland was peeled out. Patient recovered.

Rotch[15] has seen similar cases, and has seen them get well after operation.

Treves[22] had three such cases, one in an adult. One of them got well even after a single exploratory laparotomy. To this last point Dr. Branson says: "A mere laparotomy, though frequently taught to be useful in these cases, is a half measure and is not followed by success."

My own cases are as follows:

Case 1. A little girl, age 7 years, had what appeared like a typical attack of acute appendicitis. There was a history of never having been very strong, but no history of tuberculosis. Operation revealed acute appendicitis, yellow, slightly turbid fluid and numerous enlarged lymph glands. I did not examine the tubes. I removed appendix and drained several days. She recovered from the operation, but her abdomen became more distended after she left the hospital. Her temperature and pulse was one of tuberculosis. She was taken to the country. Six months later I learned that her condition was much improved.

Case 2. A man, aged 30 years, machinist, complained of stomach trouble for years. Stomach would pain after eating any kind of food. He was quite muscular notwithstanding his prolonged stomach trouble. At times his bowel movements were hard and pencil like. He had signs of hysteria and hypoaesthesias. He did not vomit. Analysis of stomach contents revealed a normal motor as well as secretory function. Examination with sigmoidoscope was negative. Examination of the rest of the body was made with great attention to detail, but everything was negative. All his former physicians had pronounced his condition functional. There was no history of tuberculosis. There was a hard

mass in right parasternal line a little beneath umbilicus. It was movable and pained only when fingers were gotten beneath it and on pulling it away from the back. Operation revealed a tumor a little larger than a chicken egg, made up of a conglomeration of partly caseous and partly cretified mesenteric lymph-nodes of the ileocecal region. The mass extended to the root of the mesentery and aorta. The conglomeration was removed in part by excision and by currettement. Mesentery was sutured with catgut. Three mesenteric vessels were injured while being dissected from the tumor. The vessels were ligated. No gut was resected. No drainage was used. Union was by first intention. Patient gained 20 pounds. Friends, however, induced patient to go west contrary to my advice.

In conclusion I wish to express my desire that the report of the above cases may arouse an increased interest in such cases.

DISCUSSION.

Dr. Walter C. G. Kirchner: Dr. Rassieur has brought out a number of very interesting points in his paper which we should bear in mind. In addition, it is well also to remember that in appendicitis, tuberculosis may be the cause, and that the correspondng glands may also be involved and should be removed.

Dr. Rassieur (in closing): I would like to accentuate one or two points brought out. Do not be misled by absence of a history of previous tuberculosis. Secondly, in the cases operated upon in America with the exception of my two, the intestines were resected. Fortunately they all got well. I, however, believe you can do just as much good by excising the gland, sewing the hole in the mesentery, and by not resecting intestines.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, Chairman. M. B. Clopton, M. C. Shelton.

EDITORIAL

SANITARY MEASURES BEFORE THE LEGISLATURE.

We desire to call attention to some of the more important bills now pending before the Legislature.

Senate Bill, No. 149, the so-called Vital Statistics Bill, was introduced in the form prepared through the coöperation of the American Medical Association, the American Public Health Association and the Bureau of Statistics of the United States. By a concurrent resolution of the Senate and House of Representatives, Dr. J. N. McCormack, the organizer of the American Medical Association, and C. L. Wilbur, the chief statistician of the United States Bureau of the Census, have been invited to address the General Assembly upon the advantages that will accrue to the people of Missouri from the enactment of this bill.

Senate Bill No. 150 authorizes the State Board of Health to compel the attendance of witnesses and the production of books and papers. The object of this bill is to enable the State Board of Health to obtain information not obtainable under the present law, and for want of this authority many investigations have been incomplete and unsatisfactory in the past.

Senate Bill No. 151 establishes the office of the State Board of Health and of its Secretary at the capitol of the State. The department of health of our great State is too important and its records are too valuable to be without a permanent place of abode. The frequent legal

questions which arise for adjustment and for which the advice of the Attorney General's office is sought and is needed, is another reason why the State Board of Health's official home should be at Jefferson City.

When the State Board of Health will have been empowered to collect and tabulate vital statistics, these should be and will be more easy of access when deposited at the State capitol.

We request our members to write to their representatives concerning these bills. To avoid confusion we would suggest that the bills be referred to by their numbers and that the individual members of the profession as well as the organized societies put themselves into direct communication with their representatives and senators concerning these important measures.

THE AWAKENING OF PUBLIC CONSCIENCE.

The medical scientist of the present generation has placed the public under many obligations, and though the value of much of this service may not be at once recognizable, some of it cannot be ignored. The experiments which led to the extermination of yellow fever in its strongholds and the limitation of malaria to within easy control, were costly but conclusive; the investigations which showed the way of defense against the bubonic plague on our western coast—resulting in the saving of millions of lives and countless millions of treasure—and the great crusade against tuberculosis, starting under Rokitansky and Koch and carried by the medical profession into every field of activity, promising to reduce the national loss of human life by 200,000 and cut in two the loss of one billion dollars annually, are burdens too stupendous for one department of science to bear alone.

Some of the battles have been won, so completely won that we of the twentieth century know little about them—about smallpox whose scars have been wiped from the face of humanity through the great discovery of Jenner; and the study and pilgrimages which led to the knowledge of the source of Asiatic cholera and checked its savage march through Christendom. Some of these victories could have been won by the profession alone, but the education of the people to the people's needs has been a compelling power which no government could long ignore, and quarantine, vaccination, enforcement of sanitary laws, and medical inspection of schools, are all logical deductions from need and knowledge.

Many of the questions have become so great, and the solution so definite, that the medical profession must place the responsibility of

providing adequate protection against preventable diseases upon the people themselves; for the medical profession can no longer carry the burden unaided and alone. The public has been shown how to protect itself and the public must now provide means of securing this protection through legislative enactment. The present session of our legislature can do much to improve the health conditions in our State and provide forces for the reduction of the annual death rate; and with a governor already aligned with every movement that will tend toward the uplift of the people we look forward hopefully to the passage of the proposed laws for the safe-guarding of the public health.

We must from now on depend more upon the layman and the layman's vote and help. When questions of vital importance are submitted to full discussion, especially when these questions concern individual life, and health and happiness in the home and home maintenance, the average American citizen will act justly and vote right. With an aroused public and good men in places of power, the solution of some of the questions will soon be accomplished. And this leads us to remark, with much gratification, that the field of politics is no longer regarded a slough, to be shunned by all right minded and intelligent citizens, but is studded with many earnest workers—physicians, educators and business men—whose sole purpose in entering politics is to serve the State along the lines for which their life-work has fitted them.

MEDICAL NEWS AND THE DAILY PRESS.

The daily press as a purveyor of medical news could be the instrument by which the public could be enlightened in a sober manner as to the progress medicine is making on the most approved scientific lines. That the press when it so chooses does its duty nobly by the scientific spirit of medicine, has been instanced many times in the history of American journalism. Nevertheless, though through its help much knowledge has been brought before the people, its lapses from a high educative standard are frequent enough to arouse in us considerable indignation. And that we are not too critical when slight errors as regards technicalities appear in various articles, our attitude of good will attests. On the other hand, when considerable space is devoted to the exploiting of an operation that has for its purpose the sole one of filling a number of columns with garbled technical talk, veneered with sensationalism derived from the flamboyant words, "wonderful," "extraordinary," "unheard of," the high purpose of medical newspaper-news

is set at naught and another step backward in using the press as a medium to instruct the public, is effected. Of course, if papers deem it their duty to publish in the most thoughtless manner anything of a medical nature that comes to the editor's desk, their act cannot but be visited by harsh criticism, for by the very flippancy of their attitude to the gravest of all sciences they betray a disrespect that merits condemnation from the whole medical profession. And no recent instance of what a newspaper can do, when the spirit moves it to allow its columns to be used as a medium for pseudo-medical chaff, has been better evidenced than by the article which appeared in the *Globe-Democrat* some weeks ago and which purported to be a layman's description of an operation of such extraordinary qualities that even the surgeon who was the hero of the occasion refused to allow his kindly and gracious mouthpiece to drag his name into the fierce light of day. All of which may be good journalism from the editor's standpoint, but in a medical sense is a demeaning of a high art to the lowlands of a putrescent sensationalism. To expatiate on the possibilities of a well-edited newspaper as a disseminator of the right sort of medical knowledge would partake of a twice-told tale, so often has the matter been broached by all interested in the advance of general medical knowledge among the people. It can be this without any loss to its much-vaunted prestige as a newsgatherer, but such is the perversity of its head that even though at times enough seriousness enters into the conduct of his paper to preclude the printing of ineffective and sensational matter, at other times the very atmosphere of his sanctum seems to drive him to extremes when it is vitiated by too much respectability.

For some time past we have hoped for the cleanly sheet that would be above the printing of a doctor's lucubrations that no self-respecting medical journal would publish, or the hopelessly confused account of what a layman thought he saw in an operating room or in a laboratory; but though our hopes were not cast any too high to be thought other than sensible by sensible people, our many disappointments in this direction have left us stranded on a truly barren beach; and that the millenium we are looking for is in sight, as many editors of recognized dailies quite cheerfully predict when the question of the printing of only correct and scientific medical news is put to them, is an exaggeration that needs no rebuttal here, for even the best expressions of American journalism are so often guilty of leaning towards medical sensationalism in preference to learning what is really scientific medicine, and what would, if properly edited, be an uplift to the public, that to face the future with a cheer would surely be a declaration of the possession of a superabundance of optimism.

LECTURES ON ORGANIZATION TO MEDICAL STUDENTS.

President Kieffer has appointed the following physicians to give talks on medical organization to the senior students in the medical colleges in the State: Dr. Wm. G. Moore, St. Louis; Dr. Wm. F. Kuhn, St. Joseph; Dr. J. D. Griffith, Kansas City; Dr. John Duncan, Columbia. The plan was conceived by Dr. A. W. McAlester, Secretary of the State Association, and has been approved by the deans of the medical colleges.

The high importance of this step is at once apparent, for through this means we impress upon the mind of the practitioner, right at the threshold of his entry into the profession, that his influence as a physician and citizen will be greatly increased if he identifies himself at once with the representative medical society of the community in which he locates. The student who is thus started upon his career as a practitioner will rarely fail of developing to their highest usefulness all the talents that should be an inherent part of the individuality of every upright physician. The public is just beginning to understand that it is not the blatant boaster of wonderful cures accomplished who is to be trusted in time of sickness and distress, and the frequent appearance of signed articles in newspapers on ultra-medical topics will soon be understood by the laity as fully as now the profession understands them—purely and simply personal advertisements—and shun the writer. It is, therefore, the duty of the officers of the organized profession to meet these young men at the beginning of their professional career and guide them toward that plane of practice which alone will lead them to an honorable execution of the high mission they are called to fulfill.

EDITORIAL NOTES

Medical Society of the Missouri Valley at St. Joseph. The spring meeting of this society will be held at St. Joseph, Thursday and Friday, March 18 and 19, 1909, under the presidency of Dr. C. B. Hardin, of Kansas City. Dr. N. S. Davis, of Chicago, will deliver the address in medicine and Dr. H. J. Boldt, of New York City, the surgical address. The St. Joseph-Buchanan County Medical Society has appointed the following general committee to take charge of all arrangements: Drs. Jacob Geiger (chairman), W. T. Elam, O. G. Gleaves, J. H. Sampson, Chas. Wood Fassett, Daniel Morton, O. B. Campbell, C. A. Good, T. E. Potter, J. M. Bell, T. H. Doyle, C. H.

Wallace, L. A. Todd, A. R. Timerman. A fraternal excursion to Sulphur Springs, Ark., is being arranged for the members and their ladies, leaving St. Joseph immediately after the second day's session.

American Medical Association. Members of the Medical Society of the Missouri Valley and the Medical Association of the Southwest, will be interested in plans that are maturing for a joint excursion train to Atlantic City in June, to attend the annual meeting of the American Medical Association. The special train will start from St. Louis via the Big Four and C. & O. railways, stopping over at Hot Springs, Va., where the delegates will be entertained at the famous "Homestead." Special rates will be in effect, including a boat trip to New York City, and returning via Niagara Falls or Washington, D. C. By combining the forces of the two societies a special train will be secured, on which no one but doctors and their families will be permitted to ride, thus affording the maximum degree of pleasure and comfort. Later announcements will be made in this journal.

Extra-Mural Professors at University of Missouri.—Dr. Jas. M. Clemens has been appointed Extra-mural Professor of Pediatrics in the University of Missouri. Other Extra-mural Professors from St. Louis are Dr. John Duncan, Professor of Diseases of the Skin, and Dr. Sidney I. Schwab, Professor of Neurology.

Entrance Requirements to be Advanced.—The Medical Department of the Western Reserve University (Cleveland, Ohio), has voted to advance the requirements for entrance, beginning with October, 1910. After that date the requirement for unconditional entrance shall be graduation from an approved college or scientific school granting the degree of A. B., B. S., Ph. B., Litt. B., (or equivalent) following the completion of a course of at least three collegiate years.

Pay Your Dues.—Members are again reminded that the fiscal year of the State Association begins on January first, instead of April first, as in past years. Dues should be paid to the county societies at once and county secretaries should remit to the state secretary immediately thereafter.

The following articles have been accepted by the Council on Pharmacy and Chemistry:

Bismuth and Lithium Citrate (Burroughs Wellcome & Co.).
Colchi-Methyl Capsules (Wampole & Co.).
Syrup Ammonium Hypophosphites (R. W. Gardner).

PERSONAL AND NEWS NOTES

Dr. J. A. Waterman, of Breckenridge, has been appointed prison physician at the state penitentiary.

The Third Congress of the American School Hygiene Association will be held in Chicago, February 22-25, in conjunction with the meeting of school superintendents of the American Educators Association. Among the important papers that will be read are the following: "The Status of Instruction in Hygiene in the Schools and Colleges of America," by Luther H. Gulick, M. D.; "School Hygiene and Efficiency," by Willard S. Small, Ph. D.; "School Hygiene and Community Health," by Jessie Benton Montgomery; "Relation of Physical Defects to Retardation," by Leonard Ayres; "A Plea for the Systematic Annual and Universal Examination of School Children's Eyes, Noses and Throats," by Frank Allport, M. D.; "Status of Medical Inspection Throughout the United States," by John J. Cronin, M. D.; "The Health of Teachers," by Willard S. Small, Ph. D.

Medico-Legal Society.—The final organization of the St. Louis Medico-Legal Society was effected on the evening of Friday, February 15. The membership comprises thirty of the representative physicians and lawyers and this number will be added to from time to time. The Society was organized for the purpose of developing more effective measures as applied to medico-legal aspects of civic affairs,—such as improvement in the system of conducting coroner's inquests, the testimony of medical experts, etc. The officers of the Society are: President, A. N. Sager, Esq.; vice-president, Dr. N. B. Carson; secretary, Dr. Henry J. Scherck; treasurer, Loomis Johnson, Esq.

Warrants Issued for the Arrest of Three Doctors.—The city attorney of Kansas City has issued warrants for the arrest of Drs. George Schmitt, James A. Hughson and Benjamin Page, said to comprise the firm of the Myers Medical Company, in Kansas City. The officers were unable to locate the men at the offices of the company and their whereabouts is unknown. These warrants are the result of the crusade against the illegal sale of cocaine in Kansas City. Much of the information on which the warrants were based was furnished by Harrison Webber, who conducted the drug store in the building in which the Myers Medical Company had its offices. It is said that the Myers

Medical Company owned the drug store and paid Webber a salary to conduct it. City Attorney Langsdale says he has enough evidence against Webber to assess a fine of $9,000. A unique feature of the crusade is the willingness of the habitués themselves to assist the city attorney in his fight against the illegal sale of cocaine.

Centenary of the Birth of Dr. George Engelmann.—The Academy of Science (St. Louis) celebrated the one-hundredth anniversary of the birth of Dr. George Engelmann, the first president of the Academy, on February 2nd.

Dr. Engelmann was born at Frankfort-on-the-Main, February 2, 1809. After completing his studies at Heidelberg, Berlin and Würzburg, he came to the United States in 1832 and in 1835 began the practice of medicine in St. Louis. Although the practice of medicine engaged the greater part of his time, he nevertheless found time to exercise his undeniable talents as a botanist. And that he succeeded as well as he did, considering the obstacles with which he had to contend—obstacles peculiar to a somewhat new and scientifically undeveloped community—attests to his mental virility and his unquenchable perseverance. Before long his writings were known not only in his native town, but throughout the whole country and even abroad. In fact, at the time of his greatest activity he ranked head and shoulders above any botanist in the United States. His greatest claim to fame in his chosen specialty was his work on the American cactus and his writings upon this subject have been accepted as authoritative by American and European botanists.

Applicants to Practice Medicine who took the examination in Kansas City, Missouri, November 23, 24, 25, 1908, with the names of colleges, date of graduation, with the number that passed and those that failed from each college:

Name of College.	Date of Graduation.	Grade.	Passed.	Failed
American Medical College	1908	70	..	1
American Medical College	1906	63	..	1
Hahnemann Medical College, Chicago	1906	79	1	..
Hahnemann Medical College, Chicago	1903	76	1	..
St. Louis College of P. & S	1907	56	..	1
St. Louis College of P. & S	1906	64	..	1
St. Louis College of P. & S	1908	68	..	1
St. Louis College of P. & S	1908	57	..	1
St. Louis College of P. & S	1908	68	..	1
St. Louis College of P. & S	1907	70	..	1
University Medical College, Kansas City	1908	61	..	1
University Medical College, Kansas City	1908	50	..	1
University Medical College, Kansas City	1908	75	1	..
Washington University, St. Louis	1908	67	..	1
Washington University, St. Louis	1908	78	1	..
Washington University, St. Louis	1908	69	..	1
Washington University, St. Louis	1906	75	1	..
Johns Hopkins University, Baltimore, Md	1906	79	1	..
University of Kansas, Lawrence, Kansas	1908	75	1	..

Name of College.	Date of Graduation.	Grade.	Passed.	Failed
Hahnemann Medical College, Kansas City....	1908	66	..	1
Hahnemann Medical College, Kansas City....	1908	76	1	..
Hahnemann Medical College, Kansas City....	1908	75	1	..
Arkansas University, Little Rock, Arkansas..	1908	69	..	1
St. Louis University, St. Louis.....	1908	77	1	..
St. Louis University, St. Louis.....	1908	76	1	..
St. Louis University, St. Louis.....	1908	75	1	..
Homeopathic Med. Col. of Missouri, St. Louis..	1908	75	1	..
University Medical College, St. Joseph.....	1908	56	..	1
Kentucky School of Medicine, Louisville, Ky..	1908	75	1	..
University of Pennsylvania, Philadelphia, Pa..	1903	80	1	..
University of Louisville, Louisville, Ky.....	1907	75	1	..
Baltimore Medical College, Baltimore, Md....	1908	80	1	..
Barnes Medical College, St. Louis.....	1907	70	..	1
John A. Creighton Med. College, Omaha, Neb..	1908	69	..	1
University of Palermo, Italy.....	1893	75	1	..
Keokuk Medical College, Iowa.....	1908	75	1	..
Woman's Medical College, Philadelphia.....	1907	88	1	..
Lincoln Medical College, Lincoln, Neb.....	1907	55	..	1
Meharry Medical College, Nashville, Tenn....	1908	75	1	..
Meharry Medical College, Nashville, Tenn....	1908	75	1	..
Meharry Medical College, Nashville, Tenn....	1908	66	..	1
Meharry Medical College, Nashville, Tenn....	1907	66	..	1
Rush Medical College, Chicago.....	1901	84	1	..
Western Reserve Med. Col., Cleveland, O....	1907	81	1	..
Marion-Sims-Beaumont, St. Louis.....	1906	75	1	..
University Medical College, Kansas City.....	1908	60	..	1

CHANGES OF ADDRESS.

Dr. O. A. Bandel, from 2004 St. Joseph avenue, to 1224 N. Third street, St. Joseph.

Dr. E. C. Bennett, from Bolckow, Mo., to 1148 Eleventh street, Boulder, Colo.

Dr. Benj. Davis, Jr., from Albany, Mo., to Cushing, Okla.

Dr. Harry W. Dickerson, from 3848 Cook avenue, St. Louis, to 809 Moffit avenue, Joplin, Mo.

Dr. C. H. Dixon, from Holliday, Mo., to Fulton, Mo.

Dr. J. W. Eatherton, from Eureka, Mo., to Lakewood, New Mexico.

Dr. E. E. Evans, from Koshkonong, Mo., to West Plains, Mo.

Dr. F. B. Fuson, from Mansfield, Mo., to Springfield, Mo.

Dr. A. H. Hamel, from De Soto, Mo., to 3519 Arsenal street, St. Louis.

Dr. G. W. Hawkins, from Triplett, Mo., to Salisbury, Mo.

Dr. Max W. Jacobs, from 3000 Olive street, to 353 Century Bldg., St. Louis.

Dr. B. C. Kern, from 5800 Arsenal St., St. Louis, to Mogollon, New Mexico.

Ned O. Lewis, from 14th and Grand avenue, to 602 Commerce Building, Kansas City, Mo.

Dr. R. E. Maupin, from Shelbyville, Mo., to Dwight, Ill., care Keeley Institute.

Dr. C. A. Mitchell, from Blythedale, Mo., to Las Cruces, New Mexico.

Dr. O. L. Peak, from 1862 N. Bl., to 540 E. Commercial street, Springfield.

Dr. J. M. Roberts, from Green City, Mo., to Ewing, Mo.

Dr. Frank M. Rumbold, from Century Building, St. Louis, to Jefferson City, Mo.

Dr. B. B. Simmons, from Oregon, Mo., to 720½ Felix St., St. Joseph, Mo.

Dr. R. W. Smart, from Marionville, Mo., to Crane, Mo.

Dr. James Stewart, 4869 Page avenue, to 4740 Washington Bl., St. Louis.

Dr. E. E. Whiteside, from Belleflower, Mo., to River Aux Vases, Mo.

Dr. J. B. Willis, from Weston, Mo., to Platte City, Mo.

OBITUARY

WILFRED L. BAKER, M. D.

Dr. Wilfred L. Baker died at his home in Salisbury, Mo., on Saturday, the 9th day of January, 1909, of la grippe complicated with acute parenchymatous tonsillitis. He was the son of Dr. J. H. P. Baker, a prominent physician of Salisbury, Mo., with whom he was associated in the practice of medicine and surgery at the time of his death. He was thirty-four years old, and was graduated from the University Medical College, Kansas City, Mo., in 1903. After his graduation, he practiced for a short time at Dalton, Mo., and then he moved to Salisbury, where he located and practiced medicine up to the time of his death. Dr. Baker had the advantage of a good literary training, having attended the best schools and graduating at William Jewell College in 1900. He was a member of the order of Elks, Knights of Pythias and Modern Woodmen. He was a young man of fine social qualities and was highly esteemed for his many good qualities of heart and head; and had he lived, he would have fulfilled the fondest ambitions and hopes of his parents and friends, who to-day are sad and sorrowing. He was especially a favorite among the young people. By previous education, and naturally of an amiable disposition, he was well fitted for the duties of his noble profession, and at the time of his death had built up a lucrative practice. He was a member of our County and State Medical Associations, was strictly ethical in all his intercourse with his professional brethren and was an adherent to the "old code" we all love so well. Dr. Baker gave promise of a useful life and to some his death may appear untimely, but God knows best; "for now we see through a glass darkly but then, face to face; now I know in part, but then shall I know even as also I am known." He was buried in the old family burying ground at Clifton Hill, Mo., by the Knights of Pythias, and a large congregation assembled to pay the last tribute of respect to the departed.

At a regular meeting of the Chariton County Medical Society, held in Salisbury, January 14th, 1909, the following resolutions were unanimously adopted:

Whereas: The golden chain that binds our membership is broken and there is now a vacant chair, it having pleased the Heavenly Father to remove from our midst our well beloved professional brother, Dr. Wilfred L. Baker, and

Whereas: Dr. Baker was a faithful and loyal member of our Society, and was always prompt in the discharge of all his professional duties, whether on the scientific program or at the bedside of his patients, therefore be it

Resolved; That in the death of Dr. Baker we have lost a valued and useful member, one who will be sadly missed in our councils and deliberations;

Resolved; That the Society tender its heartfelt sympathies to the bereaved parents and relatives of our deceased brother in this their affliction. May the kind good Spirit, whose tender mercies fall as the dews of heaven, be the God, the hope, and ever present trust of his bereaved parents and relatives.

Resolved; That a copy of these resolutions be presented to the parents of our deceased brother, offered to the STATE MEDICAL JOURNAL for publication, and spread upon the minutes of this Society.

C. A. JENNINGS,
J. FRANKLIN WELCH,
J. D. BRUMMALL,
Committee.

COUNTY SOCIETY NOTES

BUTLER COUNTY MEDICAL SOCIETY.

The Butler County Medical Society met January 4th, 1909, at their rooms in the court house in Poplar Bluff. There was a full attendance and the installation of officers was as follows: President, Dr. A. Windsor; vice-president, Dr. J. Mott; secretary, Dr. W. F. S. Taylor; treasurer, Dr. D. F. Eskew; delegate, Dr. J. J. Norwine; reporter, Dr. J. J. Norwine.

The meeting was addressed by Dr. B. C. Jones, Deputy Food Inspector. He spoke at some length, bringing out some important facts as to shortage and adulteration of food products.

The Society voted to continue the post-graduate course of study as arranged by Dr. John H. Blackburn, and adopted the following program for February:

First Monday: Anatomy and Physiology of Joints, by Dr. H. W. Davidson. Second Monday: Pathological Classification of Diseases of Hinge Joints, by Dr. J. J. Norwine. Third Monday: Treatment of Joints, by Dr. A. Windsor. Fourth Monday: Diseases of Hip Joints, by Dr. I. W. Seybold. A quiz club has been selected for each meeting, and the quiz will be followed by a general discussion.

All dues will be paid by April 1st. Much interest is being manifested by the members and there is a good attendance at every meeting. —J. J. Norwine, M. D., Reporter.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The Cape Girardeau County Medical Society met in Jackson, January 11, with eight members present.

The secretary reported that twenty-five men had paid their dues for 1909 and held receipts from Dr. McAlester for the same.

The report of the committee on membership was read and approved and on motion it was decided that the secretary have it printed and mailed to all physicians in the county.

The following program was rendered:

"Smallpox," by Dr. Vinyard. Dr. Vinyard gave an interesting talk as to the history and characteristics of the disease.

"Varicella," by Dr. Hays. The doctor's paper covered the subject very thoroughly. Both papers created good discussion.

Vaccination was also a subject of interest and general discussion.

The following resolutions, which were passed some time ago, were again brought up and on motion the secretary was authorized to send copies to newspapers:

> Resolved, that this Society considers unethical the appearance of a practitioner's name in connection with any case published as a news article, and any doctor whose name so appears should be as-

sumed guilty of the indecorum of advertising. The press has been requested in reporting a case to withhold the name of the attending physician until his consent to its use shall have been obtained.

On motion the Society adjourned to meet at Cape Girardeau, February 8th.—E. H. G. WILSON, M. D., Secretary.

CARTER-SHANNON COUNTY MEDICAL SOCIETY.

The Carter-Shannon County Medical Society met at Fremont, January 6th, with the president, Dr. Wm. Fulton, in the chair. After disposing of the routine work, the active work of the Society was commenced by Dr. P. D. Gum, of Birchtree, who introduced the subject of scarlet fever, and gave his experience with this severe malady of childhood. The doctor has had quite a number of cases in his vicinity, the epidemic being just now practically wiped out, by careful quarantine measures and appropriate treatment. What seemed strange to the doctor was the few cases of nephritis, there being but one or two in the dozen and a half cases treated. The subject was thoroughly discussed by the doctors present.

The subject of true croup was introduced by Dr. T. W. Cotton, of Van Buren, and was thoroughly discussed by the Society, many important points being elicited. The doctor had been successful in intubating a number of cases, and illustrated one or two very important points in accomplishing this very difficult task. Dr. Wm. Fulton gave his experience along this line, and while he had been quite successful in his work, he felt that some experience was necessary before a physician could become an adept.

An unusual case of threatened miscarriage was reported by Dr. J. A. Chilton, resulting in a consensus of opinion among the physicians present, that the condition was that of a placenta previa, with arrest of the growth of the fetus. The case is under observation, and the developments will be noted with considerable interest.

Among other subjects discussed were "Cuban" Itch, or an unusual and persistent form of scabies,—"Gonorrhœa," "Perineal Lacerations," etc.

The election of officers resulted in re-election of the old officers, viz: Dr. Wm. Fulton, president; Dr. J. A. Chilton, secretary, for another year. Every one enjoyed the meeting and pronounced it an entire success.—J. A. CHILTON, M. D., Secretary.

DAVIESS COUNTY MEDICAL SOCIETY.

The Daviess County Medical Society held its regular quarterly meeting at Gallatin, January 12th. There was a good attendance of the members. No papers being presented the election of officers was the only business of importance. The following officers were elected: Dr. N. M. Wetzel, president; Dr. L. R. Doolin, vice-president; Dr. M. A. Smith, secretary-treasurer; Dr. W. L. Brosius, delegate; Dr. M. A. Smith, reporter.

Several cases of interest were reported and discussed at length. The members of this Society are showing greater interest than ever before and we hope to have better meetings this year.—M. A. SMITH, M. D., Reporter.

HOLT COUNTY MEDICAL SOCIETY.

The Holt County Medical Society met at Forest City, January 7. This was the first annual meeting and officers were elected for the ensuing year.

The election of officers resulted as follows: President, Dr. John M. Tracey; vice-president, Dr. B. T. Quigley; secretary, Dr. J. F. Chandler; treasurer, Dr. C. L. Evans. The retiring president, Dr. F. E. Bullock, was elected delegate; Dr. J. M. Davis, alternate, and Dr. J. F. Chandler, substitute alternate.

After the election of officers the scientific part of the program was taken up. Dr. Quigley led with the report of a very interesting case of cerebral affection, supposed to originate from infection through the gastrointestinal tract.

Dr. W. H. Minton, of St. Joseph, was present and read a paper on "Ocular Manifestation of Systemic Diseases."

There was a good attendance and much enthusiasm was shown in the proceedings of the evening and the general work of the Society.

The next meeting will be held at Craig, March 4th.—J. F. Chandler, M. D., Secretary.

LACLEDE COUNTY MEDICAL SOCIETY.

The Laclede County Medical Society met in regular session at Lebanon, Monday, January 11, 1909.

A committee was appointed to arrange plans for taking up the post-graduate course of study.

The treasurer made a report of the financial condition of the Society.

The following officers were elected for the year 1909: President, Dr. T. B. Herbert, Lebanon; vice-president, Dr. Jno. B. Atchley, Brice; secretary, Dr. S. A. Casey, Lebanon; treasurer, Dr. J. A. McComb, Lebanon.

The Society adjourned to meet at Lebanon, Monday, April 12th, 1909.—S. A. Casey, M. D., Secretary.

LIVINGSTON COUNTY MEDICAL SOCIETY.

The Livingston County Medical Society met in regular session at Chillicothe, January 13th, 1909.

The following officers were elected for the year: Dr. W. M. Girdner, president; L. E. Tracy, vice-president; W. N. Stevens, treasurer; J. C. Shelton, secretary; H. M. Grace, delegate; J. C. Shelton, alternate.

Dr. W. M. Girdner read a paper prepared by Dr. Jas. C. Minor, Dr. Minor being unable to be present, entitled "The Importance of Early Attention in All Cases of Rectal Diseases."

The paper was freely discussed by a number present, and was thought of sufficient importance to request its publication in the Journal.

Dr. H. M. Grace read a very interesting paper on "Membranous Croup," he advancing the idea that it was laryngeal diphtheria in all instances and should be treated as such, that is, with antitoxin, and probably with larger doses than of the faucial infection. The paper brought forth a vigorous discussion, all present taking part.

The Society adjourned, all feeling they had held a profitable session.—J. C. Shelton, M. D., Secretary.

MARION COUNTY MEDICAL SOCIETY.

At the meeting of the Marion County Medical Society, February 9th, the following members were elected to office for 1909: President, Dr. J. J. Farrell; vice-president, Dr. E. H. Bounds; secretary-treasurer, Dr. H. L. Banks; reporter, Dr. I. E. Hill; member board censors for three years, Dr. C. E. Paxon.

Dr. Farrell reported several cases of children suffering from a disease, with an eruption, very much like that of scarlet fever. There was considerable fever for a few days but owing to the absence of throat symptoms, he was somewhat inclined to the belief that it was the fourth disease, described by Duke of London. The cases were apparently not contagious, for the second case did not appear in any one family of children. Others present thought the disease a mild form of scarlet fever.

Dr. E. H. Bounds reported a case of alcoholism the interesting part of which was a slow pulse, ranging from 27 to 35 per minute.

Dr. J. C. Chilton reported the case of a man past 40 years of age who had developed a rather severe headache and in about 24 hours had become unconscious, with some rise of temperature and slight spastic paralysis of left arm. No variation of pupils. Unconsciousness continued and death resulted on the sixth day of illness. Slight rise of temperature for about 36 hours preceding death. There was a history of fall as the patient jumped from a train about three months prior to illness, falling on face and head. He was dazed for a time but did not receive medical attention. History of syphilis about 15 years ago. Post mortem revealed a large clot of blood with pus and serum covering nearly all of the right side of the brain. There was also a history of suppurative middle ear disease during childhood (right side) but no recurrence in adult life.

Dr. I. E. Hill read a very interesting paper on "Epigastric Pain as a Symptom."

Dr. R. M. Winn, who has recently located in Hannibal, was received as a member by transfer from Ralls County Medical Society.—H. L. Banks, M. D., Secretary.

PIKE COUNTY MEDICAL SOCIETY.

The Pike County Medical Society met at Clarksville, February 1, 1909, and the following officers for the year 1909 were elected: President, Dr. J. E. Bankhead, Clarksville; first vice-president, Dr. M. D. Biggs, Bowling Green; second vice-president, Dr. J. D. Davis, Louisiana; third vice-president, Dr. D. M. Pearson, Louisiana; secretary, Dr. C. L. Bankhead, Paynesville; assistant secretary, Dr. W. J. Davis, Louisiana; treasurer, Dr. T. Guy Hetherlin, Louisiana.—T. Guy Hetherlin, M. D., Secretary pro tem.

RAY COUNTY MEDICAL SOCIETY.

The Ray County Medical Society held its regular session in Dr. Green's office at Richmond, January 20th. The following members were present: Drs. C. B. Shotwell, L. D. Green, Jas. W. Smith, E. F. Higdon, E. T. McGaugh and Robert Sevier, E. W. Rentfro.

On motion the Society accepted the invitation of Dr. Green to meet in his office during the year.

On motion Dr. Hermon S. Major was selected to prepare a paper to be read at the annual meeting of the State Medical Association at Jefferson City, in May.

The Society endorsed Dr. E. W. Rentfro, of Rayville, as a member of the State Board of Health.

Dr. C. B. Shotwell read a paper on "Differential Diagnosis Between Follicular Tonsillitis, Diphtheria and Membranous Croup." Dr. E. T. McGaugh read a paper on "Scarlet Fever." Dr. Jas. W. Smith read a paper on "Prognosis and Treatment of Lobar Pneumonia." All these papers were thoroughly discussed by the members present. Dr. Robert Sheetz was on the program for a paper on "Broncho-Pneumonia," but being unable to attend the meeting, he sent his paper to the Society. On motion Dr. Sheetz's paper was placed on the program for the next meeting so that the doctor might be present to read his paper.

The program for the next meeting, March 17th, was read, after which the Society adjourned.—Robert Sevier, M. D., Secretary pro tem.

SCHUYLER COUNTY MEDICAL SOCIETY.

The Schuyler County Medical Society held its regular meeting in Lancaster, with the president, Dr. E. R. Mitchell, in the chair.

Dr. A. J. Drake presented his application for membership and was elected a member of our Society.

Election of officers for 1909 resulted as follows: President, Dr. J. B. Bridges, Downing; vice-president, Dr. A. J. Drake, Downing; secretary-treasurer, Dr. H. E. Gerwig, Downing; delegate, Dr. E. L. Mitchell; alternate, Dr. H. E. Gerwig.

Quite a number of cases were discussed and the meeting proved to be a very interesting one. The attendance was small on account of bad weather.

Drs. W. H. Zeber, A. J. Drake and W. F. Mitchell were put on the program to read papers at our next regular meeting, April 13th, 1909.—H. E. Gerwig, M. D., Secretary.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

At the regular meeting, January 13, the newly-elected president, Dr. Jno. M. Doyle, was installed, and the work for the new year outlined. Plans were discussed looking to the improvement of the scientific work of the Society, as well as to the development of the social conditions.

Dr. W. E. McKinley read an entertaining paper on "The Child; What of Its Future?" in which he dealt with the responsibilities of parents and physicians, as well as with the duties of teachers and guardians. The paper was discussed by Drs. Woodson, Forgrave, Long, and Campbell.

The retiring president's address dealt with the progress of medicine and surgery in St. Joseph, and criticised the lack of specialism in the city; Dr. Forgrave stated that there were no real specialists in the city, aside from the eye and ear men, and a neurologist, and pointed out the proper means of improvement.

The secretary presented his annual report, reviewing the work of the past year, and urging that more interest be taken by the members, with a view to increasing the attendance and improving the scientific work.

The president's address and the secretary's report were received, and a vote of thanks extended to these officers for their services during the past year.

The applications of Drs. J. J. Wisser, G. R. Stevenson, and W. J. Shelton, were read and referred to the censors.

The president appointed the following standing committees for the year:

Public Health and Legislation: P. I. Leonard, Chas. Wood Fassett, W. B. Deffenbaugh, H. S. Forgrave.

Program: Chas. Wood Fassett, D. L. Humfreville, L. A. Todd, J. H. McCoy.

Executive: T. E. Potter, C. H. Wallace, J. W. Heddens, J. I. Byrne.

Tuberculosis: E. S. Ballard, J. K. P. Bowen, A. B. McGlothlan, Chas. Wood Fassett, A. R. Timerman, Chas. G. Geiger, Herbert Lee, E. H. Bullock, J. M. Bell, F. A. Ladd, F. H. Spencer.—C. W. Fassett, M. D., Secretary.

BOOK REVIEWS

Progressive Medicine, Vol. IV, December, 1908. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 333 pages, with 26 engravings and 2 colored plates. Per annum, in four paper-bound volumes, containing over 1,200 pages, $6.00 net; in cloth, $9.00 net. Lea & Febiger, Publishers, Philadelphia and New York.

The December issue of *Progressive Medicine* is fully abreast of the reputation of this quarterly for practical usefulness to every active medical man, whether physician, surgeon or specialist. In fact, its contents are purposely limited to the clinical as distinguished from the theoretical aspects of medicine.

Progressive Medicine occupies a unique position by reason of the fact that in it a high authority on each line describes all advances in his own language. It is wholly original, easy and interesting to read, and instructive on just the points the medical man most values, namely, those necessary to bring his own knowledge to date.

NOTES.

"A Knight Errant in Broadway" is the story of a certain Englishman's perfidy when he took root in Wall Street. This is only incidental, however, to the central characters, a bonny English girl of mettle and a young American who has red blood enough to rise above his early environments, which threaten to suck him down The story is full of action in present-day affairs and quite characteristic of Mr. Holland's best style.

JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume V MARCH, 1909. Number 9

ORIGINAL ARTICLES

ENDOCARDITIS.*

By J. S. Triplett, M. D., of Harrisonville, Mo.

Because it is followed by a comparatively high mortality; and also because those who fortunately survive the primary attack are unfortunately more or less incapacitated for active work for the remainder of their lives, is my apology for selecting the subject of endocarditis for your consideration at this time.

As no hard and fast line can be drawn between its varying degrees of virulency, no attempt at classification or division of the subject will be made, for the reason that a case of so-called simple acute endocarditis of rheumatic origin may pursue a benign course for several days or perhaps weeks, and then, consequent upon myocordial degeneration, very quickly terminate fatally; and on the other hand, one of the so-called malignant type, after a few days of alarming symptoms, may terminate in recovery, as regards life; but the heart may never regain its normal condition.

Jürgensen says: "If we admit the expressions benign and malignant, they must be applied only to a definite period of time, for that which applies to-day is no longer valid tomorrow." Writers are pretty well agreed that endocarditis is the local manifestation of a systemic or local infection; in other words, the results of colonization of pathogenic microorganisms upon the endocardium; that it is rarely, if indeed ever, a primary, but almost always a concomitant of an infection in some other part or parts of the body; and that, as needs must follow, it is not a separate and distinct pathologic entity.

The diseases in which endocarditis is a frequent complication are rheumatism (acute articular), pneumonia, chorea, scarlet fever, puerperal

*Read by title in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

fever, tonsilitis and gonorrhea. Less frequently it may occur in the course of diphtheria, measles, influenza, smallpox, typhoid fever, erysipelas, periostitis, septic pyemia, and many others. In fact it is possible for any infection to act as a causative agent, especially if there be some predisposing factor. As there are so many diseases in which it may be a complication we would logically expect endocarditis to be of common occurrence. And so it is; but just what percentage of morbidity it constitutes I am unable to state. Endocarditis is associated with the symptom-complex which we call articular rheumatism oftener than with all other diseases combined. Whittaker says that from 60 to 85 per cent. of the cases are caused by rheumatism.

As yet we do not know the specific cause of rheumatism, and hence do not know the specific cause of those cases of endocarditis which accompany or closely follow it. But the clinical course of rheumatic fever so closely corresponds to that of known infectious diseases that most writers have accepted the germ theory as its cause.

Inasmuch as the cardiac symptoms, in some cases of rheumatic fever, come to notice prior to the involvement of the joints, we have room to speculate upon the question whether the diagnosis should be rheumatism or endocarditis. Would it not be quite as correct to say that the case is one of endocarditis complicated by arthritis or polyarthritis as the case might be, as to say it is one of rheumatism complicated by endocarditis? In the light of our present knowledge I think it would. It is quite probable that when we come to understand the nature of rheumatism as well as we now do that of malaria, the name of the one will be no less a misnomer than that of the other, as regards its etiologic significance.

The age at which endocarditis occurs most frequently corresponds to that of the disease of which it is a complication; hence we find the majority of the cases in the period between the third and fortieth years of life. It is seldom encountered in first infancy and in old age. We may say, then, that only to a limited extent is age a predisposing factor.

The site of the lesion, especially at the beginning of all endocardial inflammation, is most usually found upon the valve structures; and of these, upon that of the mitral most frequently. In very few cases, however, is the pathology limited to these structures. It is prone to extend to the adjacent endothelium, invade the myocardium and finally the pericardium. I think the assumption of myocardial degeneration best accounts for the various disturbances of the pulse and of the circulatory system. Jürgensen is so well convinced that endocarditis is not a separate entity that he says "pancarditis will be the diagnosis of the future."

Diagnosis. It is often very difficult, and in some cases, impossible to arrive at a correct diagnosis. Especially is this true during the first stage of an attack and when there are no obstructive symptoms to direct one's attention to the heart. It is very probable, also, that many slightly

developed cases pursue a benign course, recover without sclerotic valves and their true pathology remains unrecognized by the medical attendant, even when he has made careful and repeated examinations. Then there are cases of the septico-pyemic type in which there may be neither ausculatory nor percussion evidence of cardiac disease. However, the competent observer, who habitually examines the heart, will discover more cases and make a correct diagnosis earlier than the superficial and less skillful examiner.

Since many of the important symptoms often remain latent for variable lengths of time, and none are pathognomonic, the medical attendant will sometimes avoid embarrassment and humiliation by deferring a positive diagnosis until the case has further developed.

The first desideratum leading one to suspect endocardial inflammation is the presence of one of its causative diseases.

Weakness of the heart's action is observed in all cases. This is a cardinal symptom and should be of great diagnostic value. The pulse becomes irregular, compressible and its rate quickened, from which there result cyanosis and lowered temperature of the extremities. The apex impulse against the palpating hand is notably weakened, sometimes imperceptible. Palpitation, precordial pain and a feeling of anxiety are subjective symptoms of quite regular occurrence.

When, in addition to these symptoms, there is detected a roughened first sound gradually developing into a well marked systolic mitral murmur, the diagnosis is comparatively easy. The temperature curve is of little diagnostic import except in instances where it does not coincide with that of the primary disease.

On the part of the blood, a decided leucocytosis is usually present and the percentage of hemoglobin is diminished.

Prognosis. The immediate prognosis of simple acute endocarditis is usually favorable as regards life, but the remote prognosis on the other hand, is bad as regards both life and health inasmuch as it so frequently ends in chronic valve disease. Seventy-five per cent. of all cases recur.

The malignant cases may reach a fatal termination in a day or two, or again they may be prolonged for several months or even a year and then prove fatal. We are therefore never justified in giving any but a very guarded prognosis.

Treatment. In the management of endocarditis the most important as well as the most beneficial therapeutic measure which we can employ is rest.

If the profession has erred at all in the treatment of this diseaes, I believe that error has been the failure to insist upon and, if need be, enforce rest. There is no doubt in my mind but that many of the chronic cardiac lesions could have been prevented by rest at the proper time.

Rest, absolute and unconditional in the horizontal position, should be strictly enforced from the very beginning of cardiac symptoms until

fever has entirely disappeared. Even after fever has disappeared, if there is yet disturbance of the heart's action, rest in bed should still be enforced and maintained until such disturbances have subsided.

The amount of cardiac energy conserved by rest in the horizontal position is readily apparent when we recall that the healthy heart beats ten times more per minute in the standing than in the reclining position and 20 to 30 more per minute when fever is present. This means at the lowest estimate, when fever is present, that there will be saved by rest per minute 20, per hour 1,200, per day 28,800 cardiac contractions.

The medical treatment consists in the administration of the salicylates to the rheumatic, in addition to the general symptomatic treatment of all cases. Thus, pain, pyrexia, insomnia, etc., should be met by appropriate remedies.

The emunctories should be stimulated to gentle activity and suitable nourishment provided in all cases.

The treatment of endocarditis by raising the opsonic index by specific inoculation according to Wright's technic has been before the profession too short a time and used in too few cases for us to say just what position it will occupy as a therapeutic agent. The results, however, of this method have thus far been so favorable that we are encouraged to believe, where the technic has been perfected, it will constitute a veritable specific for endocarditis as well as for all other diseases of septico-pyemic origin.

Ross reports a case of ulcerative endocarditis in a girl, which terminated in an almost uninterrupted recovery after inoculation was undertaken with a vaccine prepared from a streptococcus obtained from her blood. This girl had had considerable pyrexia extending over five weeks and had received sixteen injections of antistreptococcus serum with no good effect.

EXCISION OF THE LACHRYMAL SAC AS A RADICAL CURE FOR CHRONIC INFLAMMATORY PROCESSES THEREOF.*

By Llewellyn Williamson, M. D., of St. Louis.

In urging more frequent excision of the lachrymal sac as a radical cure for chronic diseases of the tear drainage system, I realize that I am stepping into a field in ophthalmology on which a battle has raged fiercely for some time. There is, perhaps, no class of cases which gives so much trouble to both surgeon and patient as do these, whether they be a simple epiphora or a blennorrhea of the lachrymal sac; and there is no class of cases upon which opinions as to treatment are at so great a variance. The question in the minds of most oculists in regard to these cases seems to be "To probe or not to probe; whether it is better surgery to suffer the pains and inconvenience of long and frequent probing or by excising end them." My own opinion is strongly in favor of the latter course and I am sure not only a great deal of unnecessary time and discomfort could be saved, but also a great deal of actual harm be avoided, were excision more frequently substituted for probing.

In order to justify my argument in this direction, it is necessary to look a little into the pathology of these cases. The tears, as you know, are secreted by the lachrymal gland which lies in a shallow pit in the roof of the orbit under cover of the external angular process, with an accessory portion passing down under the conjunctiva into the fornix. Normally this gland secretes only enough tears to keep the eye moistened and any excess is evaporated by the air. Upon excitation of the gland, however, either psychical or reflex, the tears are secreted in much larger quantities and are carried off through the lachrymal drainage apparatus, when this is in perfect working order. If the latter is defective, or the secretion very excessive, the tears run over the eye lids upon the cheek. But tearing from excessive secretion is usually transient in character and due to very obvious causes, such as emotional states, irritation from winds, foreign bodies, etc.; although, where drainage is interfered with, there is also an excess of secretion which is dependent upon stimulation of the terminal branches of the fifth nerve.

The cases which usually consult the medical man are those chronic ones due to interference with the drainage system. The patient comes to his family physician or oculist, complaining, perhaps, of his eye watering, the tears collecting in undue quantities and running over the cheek. As a result of this watering, if long continued, there may be a

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chronic inflammation of the conjunctiva and of the lid margins, or, perhaps, he may complain of a regurgitation of mucous into the corner of the eye, or there may be even an acute inflammation or abscess in the lachrymal sac. All these troubles are but various stages of the same disease and have their underlying cause in an interference with the proper drainage of the eye.

The lachrymal drainage system consists of the lachrymal sac or reservoir lying in a groove in the lachrymal bone on the inner side of the orbit; the nasal duct connecting the lachrymal sac with the lower nasal fossa, its exit being below the inferior turbinate bone; the canaliculi, two narrow canals leading from the lachrymal sac to the margin of the lids, and the puncta, or the opening of the canaliculi upon the lid margins, about six millimetres from the internal canthus. The normal passage of the tears along this drainage system is accomplished partly by capillarity and partly by a pumping mechanism due to the combined action of the orbicularis muscle and the lachrymal sac. This pumping action is brought about in the following manner: The act of winking causes a contraction of the orbicularis muscle. This orbicularis muscle is intimately attached to the internal palpebral ligament, which ligament is in turn intimately attached to the anterior wall of the lachrymal sac. The contraction, therefore, of the orbicularis causes a pull on the anterior wall of the sac, thus causing the sac to dilate and suck in the tears through the puncta. The elastic tissue normally present in the walls of the sac, upon release of tension from the orbicularis, contracts and in turn expels the tears through the nasal duct into the nose. It is well to remember this mechanism for it has an important bearing on the treatment of certain cases to be referred to later.

I am not an advocate of excision of the lachrymal sac in all cases, but merely wish to urge its manifest advantages in properly selected cases. It is obvious that interference with drainage may result from various causes and occur at any place along the drainage tract, and before excision is considered, therefore, a thorough examination of the entire tract should be made in an effort to locate the seat of the interference. This interference may be due to congenital abnormalities such as absence of canaliculi, occlusion of puncta, etc., to a malposition of puncta due to eversion of lids following injury or disease; to a lack of tone in the walls of the lachrymal sac; to fibrous or bony constrictions in the nasal duct, or finally to an hypertrophic condition of the mucous membrane with which the duct is lined, or to obstruction at the opening of the duct into the nose. If the constriction is in the puncta these may be gently dilated with a conical dilator, or in the opinion of many men, it is advantageous to split up the canaliculi. Personally, I object to this procedure if it can be avoided as the altered character of the canal after splitting interferes materially with the mechanism of drainage. The puncta, because of their position in apposition to the globe, assist the drainage of tears by capillarity and the canaliculi, being sur-

rounded by fibres from Horner's muscle, which contract in winking, assist in forcing the tears into the sac. This double action is lost when the canaliculi are split.

A thorough examination of the opening of the nasal duct into the nasal fossa should be made. In many instances, the mucous membrane forms here a valve-like opening, which when inflamed, entirely chokes the exit. Malformations may have to be dealt with surgically and if there is an hypertrophic rhinitis, this should receive treatment by means of alkaline sprays, etc., usual in such cases. As a rule, most cases of lachrymal obstruction begin in disease of the nose. The mucous membrane lining the duct, sac and canaliculi being continuous with that lining the nasal fossa, inflammation of the latter is very prone to cause inflammation of the former. It is rare, indeed, that an inflammation of the conjunctiva causes an inflammation of the lachrymal sac, but the contrary is quite the rule. The walls of the nasal duct consist of a thick plexus of veins, covered with mucous membrane, which when inflamed, becomes quickly engorged so as to block the channel. This engorgement, as I have said, is usually dependent on disease of the nose, and should be treated as is an hypertrophic rhinitis, by means of flushing with mildly astringent or alkaline solutions. With a lachrymal syringe inserted into either the upper or lower punctum, an effort is made to inject gently a solution which will gradually find its way through the duct. Very often at the first attempt, this is impossible and undue force should not be used for fear of rupturing the walls of the sac and causing extravasation of the fluid into the tissues, an accident which has occurred more than once. If it is found impossible at the first attempt to force the fluid through the entire duct, an effort should be made on succeeding days, and it is usually found that after two or three attempts, the mucous membrane contracts and the fluid finds its way to the normal outlet. A conscientious, careful repetition daily of this syringing will nearly always effect a cure in these cases when they are taken in hand before any more radical treatment has been instituted.

It is unfortunate that in just such cases, many surgeons resort to the use of probes. What is the result of probing in such cases? The lachrymal canal, surrounded as it is by bone, normally directed downward and backward, varies greatly in different persons. Besides this, the engorged membrane completely fills the canal, bringing the walls in apposition. The passage, then, of a probe through this canal, with its thickened and tender mucous membrane is no easy matter and is, in nearly all cases, attended by an abrasion of the epithelium, if not a tearing of the mucous membrane itself. Repair of this tear, like repairs everywhere else in the body is accomplished by the formation of fibrous tissue which, at first soft and yielding, soon becomes, as contraction continues, hard and resistant, so that the constriction formed by swollen mucous membrane is changed into a constriction formed by rigid bands of fibrous tissue. When such a condition has occurred, of course

syringing is no longer of any use and probing or some other procedure is a necessity.

It is true that when this condition exists, probing may establish and maintain the patency of the duct, but to do this requires a careful and thorough treatment for months, and in many cases, a more or less frequent probing is necessary as long as the patient lives. Unfortunately the lining of the nasal duct is endowed not only with tender mucous membrane and easily inflamed veins, but also with numerous nerve filaments so that probing is a very painful procedure. The result of this is that patients object strenuously to it and as soon as a certain amount of improvement is noted, they usually stop treatment till the case has relapsed, the regurgitation and tearing becomes again unbearable and they are forced to return for another course of probing till benefit, and not a cure, is again attained. As Herbert Parsons aptly puts it: "Thus the weary cycle goes on, epiphora and pus, alternating with probes and pain."

Where the patient can be kept constantly under the observation of the surgeon, it is perhaps permissable to treat these cases in this way, although even this I am loath to acknowledge. But where the patient cannot afford the months of time necessary or for various reasons cannot be kept constantly under observation, surely some other means of relief must be found, and this relief is best afforded, I believe, by excision of the sac. Not only is a constant regurgitation of pus and mucus from the lachrymal sac back into the conjunctiva a great annoyance to the patient, but it is a source of actual and grave danger to the eye itself. In this secretion pneumococci can always be found in great numbers and we all know that the pneumococcus is the cause of that very dangerous and serious disease, ulcus serpens. The slightest abrasion of the cornea in an eye suffering from dacryocystitis may develop rapidly into ulcus serpens, which in spite of the utmost efforts, may cause a total destruction of the cornea and loss of vision, so that even while the patient is undergoing treatment, he is carrying with him daily a bomb which may explode at any time, and for this reason, if for no other, tardiness in bringing about a cure is unwise.

Occlusion of the nasal duct, however brought about, causes a stasis of the tears in the lachrymal sac. These tears are at all times full of bacteria and when dammed up in the sac, these bacteria very soon excite an inflammation of the mucous lining, causing it to throw out an undue quantity of secretion. This abnormal amount of secretion, not finding exit through the usual channel, either regurgitates into the conjunctiva or causes a dilatation of the lachrymal sac, with gradual alteration of the character of its walls. As has been mentioned before, the walls of the sac contain a considerable amount of elastic tissue and this elastic tissue is necessary for the proper performance of its function. Stagnation of tears and dilatation resulting therefrom, causes changes in the walls with a loss of the elastic element, so that in many cases, although

the duct be perfectly patent, the epiphora continues because of the inability of the sac to perform its characteristic pumping action. It is obvious that no amount of probing, however skilfully done, can have any effect on this condition, and excision is the only procedure by which such a case can be benefited.

Although excision of the lachrymal sac is a very old operation, having been first performed by Platner in Leipsic in 1724, and later performed a number of times by Von Graefe, de Wecker and others, it has not seemed to meet with very much favor until recent years, and even today, in this country, is an operation which is not practiced nearly as much as it should be. Brilliant results attained by Voelcker in Kiel, Fuchs in Vienna, Haab in Zurich, Axenfeldt in Freiberg, Parsons and Morton in London, however, have done much to overcome the prejudice against this radical procedure and to demonstrate its extreme efficiency when properly done. The main objection to this operation heretofore seems to have been a fear that obliteration of the lachrymal drainage apparatus would cause a constant epiphora rather than a cure of this condition. This, however, is not so, as the experience of operators who have done much of this work shows. As has been mentioned earlier, the normal secretion of the lachrymal gland is only sufficient to lubricate the eye, without leaving any excess to be carried away. When tears collect in the eye, there is always an increased activity of the lachrymal gland, which increase is either psychical or due to reflex stimulation, the latter generally taking place in the terminal fibres of the fifth nerve, in the conjunctiva, lachrymal sac or nose. The presence then, of an inflamed lachrymal sac is a constant source of irritation to the lachrymal gland and causes a constant excess of secretion. Upon the removal of this inflamed sac, the cause of the excessive secretion is done away with and the gland returns to its normal condition, that is to say, only secreting enough tears to moisten the lids as they glide upon the eyeball. This, then is the reason why removal of the lachrymal sac cures the epiphora instead of increasing it. In a very few cases, it has been found that upon the cure of conjunctivitis due to the damming back of tears and secretion from the lachrymal sac, the epiphora continued, and in these cases, it has been necessary to excise a portion of the lachrymal gland also. The excision of the gland at the time of operation on the sac is strongly advocated by Holmes, of Cincinnati, who thinks it should be done in all cases. The majority of operators, however, differ with him, finding excision of the gland only rarely necessary and believe it to be better surgery to perform a secondary operation for its removal in those few cases where it seems to be required.

Much depends on the thoroughness of the operation, the technic of which is rather difficult. That of Fuchs and his assistants in the Augen Clinic in Vienna is the best I have ever seen. Fuchs has the advantage, however, of always performing the operation under local anesthesia, which, of course, causes very much less bleeding than when the face is

congested from a general anesthetic, and it is this bleeding which makes the operation difficult. American patients, however, are apparently more highly organized than the average German patient and I have found that they object strenuously to the operation under local anesthesia, and that in most instances, a general anesthetic is necessary. If a local anesthetic is preferred, it is induced as follows: A hypodermic syringe is filled with a mixed solution, 2% cocaine and 1-5000 adrenalin, and this solution is injected, 1-3 above the sac, 1-3 into the sac and 1-3 at its junction with the nasal duct. After waiting for a few minutes, it is possible in some cases to proceed with the operation without a great deal of pain.

For the operation itself, a slightly curved incision about 20 millimetres in length, beginning just above the internal palpebral ligament and 4 millimetres to the inner side of the canthus, is carried downward and outward through the skin and superficial facia, exposing the fibres of the orbicularis muscle. In making this incision, the knife should be directed towards the ear of the opposite side. The fibres of the orbicularis muscle are then dissected or pushed aside, exposing the deep facia which is continuous with the internal palpebral ligament. Tracing with the finger the lower border of the bony orbit upward along the ridge to the outer border of the lachrymal groove, the deep fascia and the palpebral ligament are cut through in this direction, exposing the sac lying just beneath. Ordinarily, the sac can be recognized by its dark blue color. The sac is then carefully dissected out, beginning on the nasal side, and dissecting around to the ocular side. The canaliculi are then cut through with scissors, the sac drawn up and cut off just below its junction to the nasal duct. A curette is then passed down into the nose and the lining membrane of the nasal duct is entirely destroyed. Great care should be taken to see that all the mucous membrane is removed, for if a small particle only remains, a continued suppuration will be the result. The skin is closed without drainage and the resulting scar is almost invisible.

The result from this operation when properly performed is universally good and in cases of atony of the sac, or fibrous constriction in the drainage tract, are such as can be attained in no other way. Not only does excision of the sac in these cases produce a radical cure, but it produces this cure rapidly and eliminates not only the pain, discomfort and loss of time due to continued probing but also removes the danger of an infected ulcer and consequent loss of sight. I am a strong advocate, therefore, of removal of the sac, first, in cases due to loss of tone of its walls; second, in cases due to constrictions in the nasal duct not of a temporary character; third, in cases of blennorrhea in which an operation is intended on the ball; fourth, in all cases which have resisted, for some time, proper conservative treatment.

Metropolitan Building.

FISSURE IN ANO.*

By W. H. Coffey, M. D., of Kansas City, Mo.

If I were going to take out an accident policy, "Fissure in Ano" is one of the things I would have it cover, because it is an accident that can happen to the youngest or the oldest of us, and because it leads so quickly to total invalidism. This condition has been designated by the various authors as tolerant and intolerant, tolerable and intolerable ulcers.

I feel that I have a right to differ somewhat with the text book writers on this trouble; we are taught by them that fissure in ano, aside from the intense and intolerable pain, is of very limited extent; an insignificant thing and easy of cure, under surgical treatment only. In fact, Ball says that he knows of no disease in which surgical treatment is attended with more certain success than in the affliction under consideration, but in my opinion it is oftentimes the beginning of a disease that is more serious and far more reaching in character than the authors teach us to believe. And again, it has been my experience that it is not always necessary to resort to surgery in order to effect a cure.

The victims of this malady in the last stages are marked individuals; they are pale and emaciated and look as if they might be in the last stage of tuberculosis; they are miserable to the last degree; yet in the first stage of this disease there is no pain. I am convinced that many a person has received a fissure in ano and recovered from the same without knowing it.

The denial of two things which are generally considered to be facts, is excuse enough, I hope, for this paper, but this denial would not be made if I was not sure of my ability to show that a fissure in ano is not painful, nor so easy of cure as the books would have us believe.

In order to elucidate this subject and make myself more clearly understood, I shall treat this disease under three heads, namely: 1st, the initiative, or stage of fissure; 2nd, stage of ulceration; 3rd, stage of abscess and fistulazation.

In the first instance, fissure, which is always idiopathic, we have a condition which is the result of trauma, something extraneous to the economy, such as the introducing roughly of the finger, or an instrument upon examination, the too rapid divulging of the sphincters, the passing of the child's head at birth or the forcing through the anal canal of hard fecal substances, causing a crack or fissure. What we now have is a break in the continuity of the mucous membrane only.

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If so slight a wound was at any other part of the anatomy nature would quickly right herself; at this part of our anatomy she leaves the reparative process at a marked disadvantage owing to the contraction of the muscles, the passage of gases and the frequent motion of the bowels. A fissure is painless and has an essential tendency to heal and, as I have already said, does oftentimes heal without the individual being aware of any injury whatever; but unfortunately this does not always result. The cell proliferation makes a great effort at reparative process but being exposed to a variety of chemical changes and microorganisms, the cells, being young and low in resisting power, are oftentimes unable to make very great headway at the reparative process, especially if the fissure is extensive and the individual is in disfavor with nature. The repair being only partially completed at this time a movement of the bowels, an examination, or anything in fact that would interfere with nature's work at this particular time, will completely sweep away, like a cobweb, the whole structure of bridging the fissure, with more or less injury to the deeper tissues. The failure of the young cell proliferation, time after time, to seal the fissure in the initiative, leads us to the second stage of this trouble, that of ulceration.

This condition is inherent in the economy; it is always symptomatic and its essential tendency is to enlarge rather than to heal. If viewed with the anus closed it appears as a slit; if seen when the muscles are at rest, or if dissected out and placed on a flat surface, it is of an oval or irregular shape with a large base.

The inflammatory exudates with the secretions, keep the injured cells exposed to chemical compounds, and soon cause degeneration. It is now that the sensory nerve filaments are exposed by the ulceration and receive impressions which are conveyed to that portion of the spinal cord from which the lumbar, the ilio-lumbar, sciatic and pudic nerves spring. We get that long train of symptoms of pain in the back and down the legs, in the genito-urinary organs, etc. And in the same way irritation of the sensory nerves supplying the external sphincter muscles causes a clonic spasm of that muscle. Constipation is a constant symptom of the disease at this stage for the obvious reason that pain is a very remarkable symptom. This intense pain is a blessing in disguise as it oftentimes forces the individual to seek relief before the disease progresses to the third and last stage.

If an ulcer remains in the anus a sufficient length of time to become somewhat tolerated, the injured tissues become infected with pyogenic bacteria, the lower fibers of the external sphincter acting as a barrier to the escape of pus which is dammed back between the external and internal spinchter muscles into the fibers of the levator ani, from which it has a ready passage through the lymphatics, up the bowel and into the superior pelvi-rectal space of Richet.

Then the gravest condition of the disease will soon present itself in form of an abscess resulting in fistula or fistulæ. This condition is oftentimes overlooked until the patient's health is entirely undermined.

Treatment. Unfortunately we seldom see the cases until they have passed into the second stage. If we could see and give them some timely advice in the use of medications to keep the bowel movement soft, instructing the patient to wash the parts after each bowel movement; and after drying with a soft cloth, use some antiseptic powder or some one of the silver balls, thereby preventing any further trouble. Yet the thing we should impress upon our people is cleanliness. You who make frequent examinations of these parts know of what I speak. Every person, sick or well, should have at hand water and a soft cloth and clean himself after each defecation instead of using the detergents now in general use, which in many cases only spread the filth and add to the danger of disease. The third stage of this disease is entirely surgical and that is so well known I need not speak of that here.

224 Bryant Building.

THE PROSTATE AS A FACTOR IN NERVOUS DISEASE.*

By Joseph L. Boehm, M. D., of St. Louis, Mo.

The prostate is to man what the uterus is to woman, in the sense that both organs have a specific function in the genital life of the sexes.

The prostate is a *sine qua non* in man's potency to reproduce. Anatomically the intricate network of blood vessels and nerves surrounding and supplying the uterus and prostate, bear some points of very close similarity.

A diseased uterus commonly produces some functional or organic lesion of the nervous system. This fact has been recognized since the early days of neurology and gynecology. Not many years back it was a common practice to make a snap diagnosis of hysteria in many neurotic females, without any endeavor being made to locate the exact seat of the trouble, whether intra- or extrapelvic.

To-day, however, neuroses in the female are treated scientifically by establishing the absence or presence of uterine or pelvic disease.

By analogy in considering neurosis of the male sex, I believe that very commonly the male pelvis is not thought of, and it is not a common practice to establish the presence or absence of an intrapelvic lesion. The principle of determining if male pus tubes, pelvic adhesions or organic lesions of the prostate or rectum exist should be established.

In considering the male pelvis, we can readily conclude that the prostate is the organ of paramount importance and when diseased has a prolific influence on the nervous system because of its complex and intimate relationship with both the sympathetic and spinal systems.

Byron Robinson has made a careful and extensive investigation on the anatomy of the pelvis. He describes a constant structure, the pelvic brain, formed by the union of the visceral branches of the sacral plexus with the hypogastric. He says: "The function of this pelvic brain is to rule the physiology of the tractus genitalis, urinarius and intestinalis. The pelvic brain is a nervous center, *i. e.,* it receives, reorganizes and limits nerve force."

In order to fully appreciate the relation and influence of the prostate on the nervous system, we must study its anatomy. As a rule very little attention is given to the prostate in the dissecting room; the average student is fortunate if he acquires a superficial knowledge of its anatomy and hears an occasional reference to this gland.

Hodgson, of London, in 1856, described the gland as follows: "The muscle structure from the mucous membrane of the urethra to the cap-

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sule of the prostate may be considered as a general muscle coat of the urethra interspersed with glandular tissue." Home, in 1806, announced a third lobe, which we consider as pathological. Reginald Harrison (*Lancet,* 1886), asserted that the prostate is largely a muscular organ whose chief function is support of the bladder. He explains incontinence of urine as being caused by a lack of development of this gland.

George Walker (*Johns Hopkins Hospital Bulletin,* 1900, Vol. 2), after thoroughly investigating prostatic anatomy by dissections on mammalians, arrives at conclusions at variance with previous investigators. He finds that the prostatic muscle exists as a definitely distinct muscle from the bladder. The whole muscular structure is arranged primarily to compress the prostate and not to act as a vesical sphincter, as had been supposed by Harrison. He further claims that the prostate belongs to the generative and not to the urinary organs, as its epithelium is an outgrowth of the Wolffian ducts, as are the testes, vas deferens and seminal vesicles. Also the prostatic muscle is derived from the muscular coat of the urethra and adenoid tissue is scattered at irregular intervals throughout the gland. The glandular substance forms about five-sixths of the organ. Fuerbringer agrees with Walker that the prostate is as important as the spermatozoids, for the fluid which it furnishes as a vehicle for the semen allows their motility, and a diseased prostate may cause sterility because an abnormal prostatic secretion may alter the vibratile movements of the spermatozoids.

Freyer, of London (Surgical Diseases of Urinary Organs, 1908), says: "The prostate is in reality composed of twin organs of apparently a purely sexual function, which in some of the lower animals remain distinct and separate throughout life, as they exist in the human male during the first four months of foetal existence."

The physiology of the prostate is all important, but judging from the very little attention paid this subject in text books on urology and physiology, one would imagine that this gland is of no more importance than a small lymphatic node. To the experienced urologist, however, its physiology is a subject of serious attention and study. A very able presentation of research in this line is reported by Heinrich Stern, (*American Journal Medical Science,* 1903, Vol. 126), from which the following is summarized: "The normal juice of the prostate gland even when procured under the utmost precaution is never entirely free from substances secreted by the adjacent glands. A specific ferment causing coagulation of the contents of the glandulæ seminalis was described by Cammus and Gley."

This coagulation is not produced by rennet, fibrin ferment or blood serum. The secretion of the prostate does not alter either blood or milk when mixed therewith.

Lecithin produces the milky appearance of prostatic fluid. I believe that prostatic lecithin is not a waste product; is it not possible that there

may be some internal secretions of this gland essential and beneficial in body metabolism?

Kraus maintains that spermatozoa cannot preserve their vitality in the uterine mucosa in the absence of prostatic secretion, but that in its presence they retain their physiological potency often longer than thirty-six hours.

We therefore realize that the physiology of the prostate is not as thoroughly and accurately understood as its anatomy. The inflamed prostate produces numerous reflex neuroses. The multitude of symptoms due to these reflexes occur not only through the motor and sensory tracts, but also through the vaso-motor system. Cerebral hyperemia, hyperesthesia of the eyes, coccodynia, coldness and numbness of the lower extremities, are directly dependent on the vaso-motor influence. Reflex pains along the obturator, ilio-inguinal and ilio-hypogastric and hemorrhoidal nerves are also some of the reflex conditions.

We will now consider some of the diseases of this gland and trace the effect and influence of morbid conditions on the nervous system.

Syphilis of the Prostate. Syphilis of the prostate is well worthy of close observation. It is surprising how scant the literature is on this subject. From personal observation I can say that syphilitic prostatitis is a distinct entity. Syphilitic involvement of the prostate does not necessarily in all cases mean a previous venereal or inflammatory infection of the gland. In some of the observations, it was difficult for me to say whether the systemic syphilitic infection or the involved prostate caused many of the neurotic symptoms in some of these cases. In two cases there was excruciating pain in the lumbar region, the patients gladly remaining in bed. In all these syphilitic cases, the periprostatic tissues were so edematous that the seminal vesicles could not be outlined by palpation. It is well to remember in this condition that in prescribing the iodides, that free iodine is liberated in the urine and in addition to the inflamed prostatic mucosa of the urethra is added the irritating influences of an iodized urine.

In referring to inflammatory conditions we will consider that the subacute and chronic inflammatory conditions are of more importance in causing reflex neuroses than the acute conditions.

Some authorities claim the seat of sexual sensibility is the vera montanum, on the floor of the prostatic urethra. It has been my practice to examine with the urethroscope all cases of sexual perverts, masturbators and old roues, and almost always in these individuals have I found a hypertrophied vera montanum, bleeding very readily on the touch of a cotton applicator through the urethroscope.

More generally, however, we find the seat of sexual sensibility described as belonging to the prostate without any particular part being designated. I agree with Lydston, that "the sexual function of the prostate is rather complex comprising several elements, viz: a special sensory, secretory and mechanical."

Chronic diffuse prostatitis, interstitial and follicular, is a very common condition, commonly occurring as a sequel from a simple or a gonorrheal posterior urethritis that is uncured. Chronic prostatitis may result from the acute or it may originate as a primary disease. Prostatorrhea is a very common symptom with a frequent tickling, creeping sensation of the urethra, frequency of urination, hypersensitiveness on passing a urethral instrument into the deep urethra, and an occasional ardor urinæ. Undefined pains in the thighs and sacrum, premature seminal ejaculation in coitus, excessive nocturnal emissions, painful or prolonged erections bordering on satyriasis, when sexually excited or even caused by peripheral irritation of the penis by the clothing; these are some of the very common symptoms.

Kreissl (*Urogenital Therapeutics,* 1900), says: "The long train of local and reflex disturbances and the functional derangements terminating in sexual neurasthenia require our full attention." He refers to those cases resulting from sexual excesses, etc., as the "aseptic type" of prostatitis. Numerous cases of prostatic neuroses, following chronic prostatitis occur in which there has never been a history of any preceding venereal disease.

Kraft-Ebing says: "The frequency of general neuroses and psychoses arising in sexual, functional or organic disturbances is easy to understand. Hyperesthesia, indicative of a cerebral neurosis may be superinduced by prostatic disease, producing increased sexual desire or satyriasis." This is intense and at times there may be maniacal sexual excitation.

In acute and subacute deep urethritis, we commonly find a patient complaining of increased and prolonged sexual excitability. This prolonged and continued congestion of the prostatic urethra is a vital factor in considering the etiology of chronic prostatitis.

White says: "Chronic prostatitis is a more frequent occurrence than the acute form of the disease, but is less understood. A prostate gland the subject of chronic inflammation may be found larger or even smaller than normal size."

Belfield says: "No author that I have consulted, notes the fact that chronic inflammation affecting the prostate is commonly not limited to that organ, but invades a part or the whole of the genital tube proper and naturally invades the connective tissue enclosing the tube."

Fuller says: "To differentiate a sharp border line between a chronic prostatitis and a chronic seminal vesiculitis is not as simple as it may appear. A characteristic symptom is the profound mental depression exhibited by the patient."

According to Chetwood, "Chronic prostatitis is liable to be attended by various reflex phenomena, psychical disturbances, sexual debility and neurasthenia."

Relation of the Prostate to the Spinal Cord. What is the relation of the prostate to the spinal cord? It has a direct relation and influence

as follows: The center of erection and ejaculation is in the lumbar region of the cord; the cerebral genital center, which is largely inhibitory, presides over the prostate, genitally speaking.

Some of the nerve fibres passing between the spinal cord and the genital center of cerebrum transmit exciting and others inhibitory influences. The prostate has erectile as well as muscular and glandular tissue and participates in the venous as well as the arterial engorgement in sexual excitement. A tendency to frequent or constant erection and impending orgasm, as is found in many of the degrees of prostatitis, has a devitalizing influence on the spinal cord. Ultzman and Winternitz both recognized this influence on the cord, the one experimented with electrotherapeutics and the other with hydrotherapy in spinal derangements following this prostatic condition.

Friend (*Journal American Med. Assn.,* 1904), describes a prostatic crisis as a symptom of incipient tabes dorsalis. He claims pain is particularly localized in the perineum in periodic attacks of three to five minutes. Asthenia of the spinal cord, in its different parts, occurs secondarily to prostatic disease.

Asthenia of the dorsal cord is indicated by pain in the occipital region, the nape of the neck and shoulders. Pains in the lumbar region and over the kidneys, are due to lumbar asthenia. Cerebral exhaustion through the influence of the genital center, is indicated by asthenopia. Pain in the cervical and occipital regions when complained of seldom leads the physician to think of prostatic disease as the primary cause. The following case illustrated this condition:

Mr. L., age 27, traveling salesman, contemplated matrimony, was much worried with paroxysmal pains in the cervical and occipital regions; a heavy dull feeling in the nape of the neck and a sensation of weight in the center of the perineum. Patient stated that he thought there was some relation between these pains, being very observant and intelligent.

Urethra was examined with the urethroscope and the prostate palpated per rectum, showed a marked congestion of the prostatic urethra, a hypersensitiveness of the prostate, which was firm, hard and somewhat large. No gonorrheal history but a frank confession of prolonged sexual excitation with only temperate amount of intercourse. A three months treatment of local applications to the urethra and rectal treatment of the prostate, completely relieved his pains in neck and occiput and he discontinued wearing his glasses that had been prescribed by an oculist for his so-called weak eyes.

Neuralgia of the Prostate. Neuralgia of the prostate is very often caused by a non-venereal inflammatory hyperesthesia of the prostatic urethra. Keyes makes a distinction between the two classes of cases, one pure neuroses, the other cases of sexual excess in the young.

This is one of the most distressing and harassing of all prostatic diseases to the patient and our efforts at rapid and effective treatment are often very slowly responded to, much to the chagrin and disgust of our

patients. It may be reflex to some disease of the testes or epididymi, and *vice versa;* neuralgia of the testes and spermatic cord may be merely a reflex condition due to a chronic inflammation of the prostate. At present I have a case of this latter class under my observation, which is due to a chronic gonorrhœal prostatitis, in a dentist who has suffered so severely in the last three years that he now desires a prostatectomy with the hope of getting his aching testicles relieved.

I have a very interesting case of chronic prostatitis under observation, with a severe sacral pain reflexly for some months, who suddenly developed a dull pain over his upper pubic region, and symptoms suspicious of renal colic. An *x* ray picture shows a small calculus in the lower end of the right ureter. In this case undoubtedly his prostatic disease long preceded the stone in the ureter.

Very commonly we hear of sciatica, sacro-iliac disease and diseases of the psoas muscles, being diagnosed because of some vague pain as a symptom in the upper or middle of thigh, when a thorough and well directed examination of the prostate, and the proper treatment may bring a speedy relief to the patient.

A patient, 22 years of age, left the Insane Asylum one year ago, where he was incarcerated for acute mania. He admits excessive masturbation for months, and presents all the appearances of dementia, while he is very rational at times. He said he often told the physicians of pains in his sacrum and hips, and he was dismissed without any attention for same. I examined his prostate and found same as large as a good sized lemon and abnormally sensitive to palpation. Urethra extremely hypersensitive. Prostatic treatments have made a different individual of him, and done much to quiet a very neurotic patient.

Prostatic gout is a term coined by Harrison and is not generally referred to as a distinct entity. In this condition we have a typical picture of systemic gout with the corresponding involvement of the urinary tract, and the prostate involved merely as a coincidence.

Sexual Neurasthenia. Sexual neurasthenia is a vague, misunderstood term, well worthy of consideration and is so commonly used to cover much professional ignorance and omission. It is a secondary condition only too common as a sequel of a diseased prostate as a primary factor. Abrams in a recent monograph, says: "Nervousness while expressive of an enfeebled nervous system, is an expression evoked by some irritant, resident somewhere in the system otherwise than the nervous system." If this definition be correct then we may assert that sexual neurasthenia is dependant on some irritant in the genito-urinary tract, not in the nervous apparatus.

This irritant is only too commonly a chronically diseased prostate. Bears, a pioneer neurologist claims, "next to the stomach the prostatic urethra is the most important center of reflex irritation in the body. There is every reason physiologically and anatomically why this should be so and a close study of the symptoms of nervous debility proves it to be

so. A morbid state of the prostate is both an effect and a cause of nervous exhaustion; for it is impossible to have an irritable prostate and yet be in good health in other respects."

Sexual neurasthenia is an impoverishment of nerve force and without doubt it is proven that prostatic disease produces it. In this condition we may find a prolonged phosphaturia and oxaluria, which does not as a rule respond to a change in dietary or mineral acids.

Therefore in a neurosis, where there exists a continued phosphaturia or oxaluria, and a condition of irritation in the genital tract, after eliminating the possibility of calculus, we must remember the prostate as being the factor to receive attention.

Psychoses from chronic disease of the male genital organs is only too frequent. Lydston says: "Care must be taken to carefully discriminate between cases that are psychoses *ab initio* and those in which the psychic element is simply an ingraft upon the symptoms produced by the organic disturbances."

The following illustrates a case of psychosis from prostatic disease in which there was no evidence of organic nervous trouble.

Mr. X., age 35 years, merchant, married for two years. He suddenly became worried over his inability to perfectly fulfill his marital relations. He complained of physical weakness and inability to concentrate his mind on business matters for any length of time, with occasional cardiac pains and palpitation, black spots before his eyes, occasional vertigo while walking on the street. While at work at his desk at intervals of two months he had attacks of syncope. His case was diagnosed by an ophthalmologist, who used the ophthalmoscope, as anemia of the brain; by an able internist as an incipient myocarditis, who sent him to a sanitarium for several weeks to take a course of mineral baths, etc.

Finding that hydrotherapy failed to relieve his spinal weakness, he consulted another clinician, who told him he had enteroptosis with autointoxication and was advised to wear an abdominal belt and was given intestinal antiseptics.

He finally came under my observation, and as I had known this patient very well socially for several years, I knew that his prematrimonial habits were those of sexual excesses and dissipation. I attributed his spinal asthenia to his past habits and life, and thought the cerebral exhaustion, enteric and cardiac symptoms were merely secondary conditions. The patient agreed that his past sexual career had some bearing on his present condition, causing his apparent impotence, etc. Urethroscopic examination of his prostatic urethra showed an edematous vera montanum, and merely swabbing his urethra with a cotton applicator set up a hemorrhage, showing a high degree of congestion. Prostate was extremely hypersensitive, so that on rectal palpation patient fainted in the office. Prostate was soft and large, causing, as I believed, to a great degree, his constipation.

Local applications and treatment made rapid improvement so that the patient's confidence in the diagnosis was obtained. Chronic prostatitis existed in this case, with an absolute denial of any previous gonorrhea. According to his statement, he consulted six different clinicians and not once was any hint made of any possible prostatic involvement. He had been constantly under observation for the past three years and he has successfully impregnated his wife and is now living a happy and comfortable life.

From records of my clinics, I can absolutely prove that very few of the average negroes allow themselves to get cured of gonorrhea, seldom if ever returning when the urethral discharge diminishes and as is so common when a posterior infection sets in, the urethral discharge temporarily ceases, they have often said they are well. Therefore they go on indefinitely with a posterior gonorrhea and as we presume only too frequently the prostate gland becomes involved. Many of these patients have told me in the clinic that they have had some kind of a urethral discharge for years. In a recent magazine article, entitled, "The Future of the Southern Negro," the writer, a physician, stated that the large percentage of chronic venereal diseases amongst them is appalling. It is almost second nature for the roustabout or plantation hand to have his so-called "running-rings," the vulgar name for a urethral discharge. In his hip pocket only too commonly does he carry his bottle of harlem oil, or a mixture of copaiba and nitre, which is the prophylactic and specific he prescribes for himself.

Such a negro, low in the scale of intellectual development with a diseased prostate and prostatic urethra, is in a condition of constant erotic excitation. At times he is so excited that he borders on a state of orgasm, like a vulture seizing its prey on the field, he assaults some innocent woman he passes on the highways.

There is a popular fallacy amongst some ignorant persons, that to cure a clap, intercourse should be had with a virgin. This also may have some influence on his ignorant superstitious mind. How many white men of intelligence boast of their mornin drop and urethral tears of years standing.

May I assert without fear of contradiction that some forms of sexual perversion may a priori be due not to a psychosis but to an originally diseased prostatic urethra, affecting the nervous system.

Irritable prostate is frequently referred to. It is merely a symptom of some organic prostatic disease possibly an old gonorrheal condition, causing all varieties of reflex neuroses. We have shown the relation of the prostate to the sympathetic nervous system. Therefore it is proper to believe that erotic delirium is superinduced by some chronic inflammation of the prostate or exudate in its sheath.

"Do something for me, or I will attack a woman on the streets," is the statement I have heard from these sufferers, who have often been

men of culture and standing. The poor negro, however, does not realize that his excitation is due to some previous venereal infection. In 1899, at the St. Louis City Hospital, I made a careful study of the prostates of negroes and found a large number of diseased conditions, where the patients never placed any relation to some previous urethral infection. Tuberculous involvement of prostate and epididymi was very common.

In a medico-legal contest on a criminal pervert is it not logical to examine his genital organs and the condition intrapelvically, in ascertaining his mental and civil responsibility? Is not chronic disease of the prostate as much of a specific condition as thickening and inflammation of the covering membranes of the cerebrum for which many a criminal is sent to an asylum?

Medico-Legal Status of Criminal Perversion. Psychiatry should take cognizance of the possibilities of this condition; a staff of consulting neurologists may examine a criminal as to his mens sans—does a staff of urologists often examine the genital organs of the accused by order of the court?

A man who commits rape is probably as insane as one who has a "brain-storm" or "dementia Americana" and is entitled to as careful an examination of his genitalia as these individuals are to the defense by noted alienists who are paid princely sums for their diagnosis of fabricated mental diseases, to which some have so credulously and willingly testified.

Recently in St. Louis, a pervert known as "Jack the Stabber," was convicted on the testimony of examining neurologists. The testimony does not show that any examination was made of his pelvic genitals to show the presence or absence of any organic sexual disorders; however, more stress is laid as a rule on hereditary taints and predisposition than on the *status presens* of the criminal. It is my firm conviction that it is only just to the accused to make such an examination of his genito-urinary system.

In Summarizing, we Conclude the Following: First: The prostate and its appendages when diseased have a special influence on the nervous system, in close similarity to the nervous sequelæ of the diseased female pelvis.

Second: The prostate and seminal vesicles are to the neurotic male what the uterus and tubes are to the female and must always be carefully examined in neuroses.

Third: Apparently simple disturbances of the prostate may cause serious reflex neurotic conditions because of the complexity of the nervous mechanism surrounding and supplying it.

Fourth: The question of an internal physiological section and the possibility of the lecithin and organic constituents of prostatic secretion serving as a nutritive factor to nerve metabolism, has not as yet been scientifically determined.

Fifth: Spinal asthenia and cerebral exhaustion are very common, often ascribed to overwork at the office or in literary pursuits, but not always recognized as dependent on a diseased prostate.

Sixth: In cases of sexual crimes and criminal perversion, an intra- and extrapelvic examination of the genitalia of the accused should be made by expert urologists at the same time that the expert neurologists examine the mentality of the accused.

Seventh: Jurists should recognize the mental condition of the fiend or pervert, who commits sexual crimes as not always due to a hereditary taint, but probably as commonly the result of some previous urethral disease, uncured at the time. From this chronic diseased condition sexual mania results.

Eighth: There is a medical aspect to the recent lynching and riots because the fiends responsible for same are diseased and not human monstrosities. Temporary sexual insanity is a reality as much as a deranged mentality caused by typhoid fever or some condition of hyperpyrexia.

THE PREPARATORY AND AFTER-TREATMENT OF SURGICAL CASES.*

By J. Nelson Barger, M. D., Albany, Mo.

The experience of ten years of general practice together with manifold observations, forces me to the conviction, that not enough time is usually given to the preparation of the patient for operation. This does not apply to emergency cases which we are compelled to accept and treat without preparation.

But the fact is, that many cases come to us in the state of physical debility, whose prospects of recovery could be greatly improved by careful preparation before operation.

Our duty begins and ends with the physical disabilities for which relief is sought, and I am convinced that the death rate may be reduced by a thorough systematic upbuilding of the body tissues before operations and the proper after treatment, till the functions are made normal as nearly as possible.

If this degree of improvement can be so easily gained, why not, when circumstances will permit, take more time for the preparation of the patient, and especially the after treatment, which is ofttimes as important as the operation itself.

The many cases that come to the surgeon for operation have autoinfection and the surgeon will wonder why his patient does not recover from the effects of the operation more rapidly; this, in many cases, is due to autoinfection. This autoinfection may come from the gastrointestinal tract, kidney, liver, or by poor elimination from the skin, demonstrating the necessity of a complete elimination before operation.

It is not always possible, and practically rarely so, in emergency cases to adopt the precaution, but extra attention should be paid these cases after the emergency is past—namely as complete elimination as possible. For present purposes, patients may be divided into two classes: those who have sustained accidents or sudden surgical diseases where no time is afforded for preparation, and those who have chronic conditions and are subject to surgical measures which are, however, sometimes made abrupt by sudden decision. In the former case, the surgeon is compelled to work hastily; in the latter, time for preparation should always be afforded. Experience teaches us that a few days, sometimes even a week, may be well spent in preparing a patient for operation. Preexisting diseases have a great deal to do with the results of operations,

*Read by title in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

as they may have left some sequelæ that could be corrected by the surgeon before operation. If some organ in the human anatomy is not functionating properly, due to pre-existing diseases, the surgeon should correct it, if time will permit.

Foresight will often dictate the preparation of some part of the body not directly involved in the field of injury; for example, in the case of gun shot or stab wounds of the abdomen, the back should be scrubbed and cleansed and the patient laid upon sterilized material for posterior drainage if required. A deranged digestive system is one of the greatest difficulties the surgeon has to contend with; a well regulated diet should be selected for these cases before operation. The intestines should be made to perform their work by the mildest measures that may prove effective,—mercurials are agents of great value as they not only stimulate secretions but are antiseptic in their action.

Sodium phosphate is useful when something stronger is not necessary. Many patients suffer from intestinal torpor, especially of the colon. In such cases a high colon wash will give gratifying results. Before leaving the digestive tract let me again impress on your minds the great necessity of cleaning out, clearing up and making the digestive tract as aseptic as possible. A careful study of the urine should be made before operation, both quantitative and qualitative; it is necessary to know the solids that are being excreted, renal insufficiency being one of the most dangerous difficulties the surgeon has to contend with. This condition should be thoroughly investigated, as it may be of some help as to the choice of anesthetic.

Choice of Anesthetic: This may depend upon the individuality of the case. Where there is a tendency to renal insufficiency due to organic changes in the kidneys, ether would be the safest anesthetic, but as a general anesthetic suitable to the majority of cases, hyoscine-morphine-cactin, with the inhalation of a small quantity of chloroform, will usually prepare the patient for operation. With this anesthetic, the patient gets the physiological rest without much nausea and vomiting.

After-Treatment. The care of patients after operations is a factor in a surgeon's success and calls for discrimination and judgment.

Extreme restlessness is undesirable from every point of view. When coming on early it is generally due to one or two causes: First, insufficient oxygenation, or nervous temperament of the patient. It also frequently accompanies shock, and constitutes one of its most disturbing features. It may be combated by a subcutaneous dose of morphine or heroin, but my preference would be hyoscine-morphine-cactin. Restlessness after operations is not always a symptom of pain. Physiological rest of the operated part is necessary for the process of prompt repair after abdominal operations, especially when restlessness and vomiting are combined; much harm may be done if the patient cannot keep the parts quiet. When an operation has been performed either in the home or hospital, a battle at once sets up between the recuperative powers of

nature on one hand, and the pathology of the wound on the other. If we are to assist nature to the utmost in this struggle, these things are essential: First, the wound must be dressed in such a manner as will prevent the invasion of bacteria. Second, if possible, we must prevent bacterial invasion of the body through other avenues. Third, we must secure, as nearly as possible, both physical and mental rest. It is in these things that the home outshines the hospital as the rays of an electric light exceeds the tallow dip. And I will say without fear of criticism, that in the case of an operation in a well prepared home, the patient recovers from the effects of the operation more rapidly. That the modern hospital has both a field of usefulness and furnishes clinical material to teach, train and produce the most skilled operators, is beyond question, but that it is not as safe for the patient as the home, under the hands of the same operator with the same subsequent nursing, is the province of this paper to demonstrate.

As quoted by Dr. Chambers of St. Louis: Let a hospital be kept ever so well and furnished with a corps of the most skilled and scientific attendants, it is the natural depot for disease germs in which patients are lodged, containing every pathogenic germ and giving them off with every exhalation of the breath, evacuation of the bowels, skin exfoliation and excrement, and elimination by kidneys, poisoning the air within the hospital; and were it not for the fact that the hospitals are constantly fumigated and great care taken to prevent interior contagion, every hospital in the land would be a veritable pest-house. This is verified by the medical, or rather hospital, history of our Civil War. Surgical patients taken to hospitals are almost invariably operated on before they become acquainted with their new surroundings. The result is they are wrought up, nervous or excited by every strain or unfamiliar sound after coming from under the anesthetic. They realize that the psychic influence of home has passed away, and they are in a struggle for existence. Their groans and moanings may and do ease their sufferings, as well as drown the medley of hospital sounds during the first twenty-four or forty-eight hours of their intense physical sufferings and shock. But, when exhausted nature demands rest and the severed nerves become painless, they are then disturbed by their strange surroundings. The home presents an entirely different condition.

There are three very important things to be considered by the surgeon after operation: First, secondary hemorrhage; second, shock; third, after-treatment of wound.

The danger of secondary hemorrhage pertains mostly to septic conditions. In an absolutely aseptic wound properly cared for, this is almost impossible, but as soon as germ activity begins lymph barriers are broken down, tissues softened, and weakened vascular walls may give way. Secondary hemorrhages may call for a ligation of a main trunk not previously attacked and in a majority of cases will demand reopening of the wound and further search for the bleeding point. The

signs of secondary hemorrhage will vary with a location of its source. Occurring on or near the surface it will usually stain the dressing; occurring deeply as in the pelvic or abdominal cavities, it will produce prompt symptoms of shock, that is, low blood pressure, the degree indicating the extent of blood loss. In these cases, unless the patient's condition contraindicates the measure, the wound should be opened under anesthesia and the source of the bleeding sought out and mastered.

Shock may be defined as a condition of general vital depression, or a state of general exhaustion coupled with a dilatation of the peripheral arterioles, and a loss of the normal blood pressure.

Symptoms: The symptoms of shock will depend upon its severity. In a well developed case of shock, the patient's sensibilities are lessened and his mental faculties held more or less in abeyance. The pulse will be quickened, feeble, thready, and perhaps irregular; the face and mucous membranes are paled, the eyes sunken and listless, the face, hands, and often the entire body are bedewed with a cold, clammy perspiration. Nausea and vomiting occur in many cases.

Diagnosis: Shock must be differentiated from fat embolism, from hemorrhage and from the effects of ether, or chloroform. It may, however, be associated with each or all of these. Fat embolism is more liable to be seen in operation of the osseous system, and it makes its appearance in thirty-six or forty-eight hours after the operation, shock coming on immediately after operation. Hemorrhage is a very frequent associated factor with shock and aggravates the latter condition, but the two may be, and often are, entirely separate.

Treatment of shock: Apply hot applications externally. In my experience with shock there is nothing that meets the condition and which sustains the nervous system and holds the ground gained so well as strychnine; nitroglycerine may be given in doses of one hundredth grain. Adrenalin, in the writer's experience, acts promptly in increasing the blood pressure. However in the treatment of shock there are conditions to be met beside the loss of blood pressure. One of these is the loss of muscular tone, and the other, the practical suspense of the mental faculties. It is probably true that anything which assists in restoring blood pressure will also re-establish muscular tone and restore the mental faculties. These conditions are met more perfectly in shock without hemorrhage by the use of strychnine, caffeine, nitroglycerine, whiskey, adrenalin and normal salt solution, than by any other remedies.

Treatment of wound: The object of wound treatment is to prevent anything from coming in contact with the wound surface which can convey infection and to limit the number and the virulence of bacteria whose entrance cannot be prevented. The general practitioner is ofttimes responsible for the infection of the wound after operation. The hands should be thoroughly scrubbed and made as aseptic as possible. If drainage has been used, the wound should be dressed at the end of

twenty-four or forty-eight hours and the gauze or tube removed. Repair will not be hastened by needless inspection; fever, pain, odor and saturation of dressings will indicate the necessity of examination. The important part of success in the healing of the wound is aseptic surgery before and after operation.

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GUMMA OF EXTERNAL NOSE. REPORT OF A CASE.*

By J. S. Wever, M. D., Kansas City, Mo.

February 17, 1908, Mrs. C. E. W., age 28, housewife, white, American.

Family history. Father and mother living and in good health, aged 70 and 68, respectively. Mother had two sisters die of tuberculosis. Patient has two brothers and one sister living and in good health and none dead.

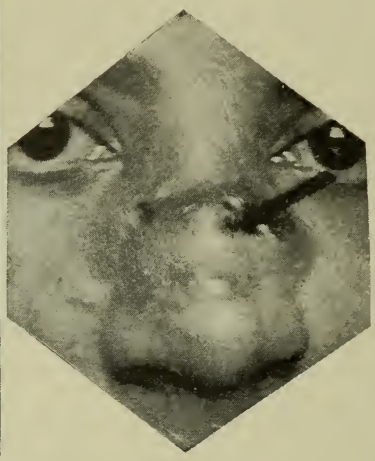
Personal history. Married first husband secretly fourteen years ago when a mere school girl of 14. Discovered he had specific disease after having been married to him for seven years and after that had nothing more to do with him. Married second husband 14 months ago. In the intervening period she had a tonsillitis which hung on for two months and finally got well with local treatment. Second husband admits specific infection for which he took treatment and was told he was cured four or five years ago. (Two or three weeks after seeing patient, I treated her present husband for a deep ulcer of the pharyngeal wall behind the right posterior pillar, which yielded readily to specific treatment). Patient admits six miscarriages with her first husband and two with the second. She had one child go to term and that one died with meningitis at four months old.

The lesion began two months previous to examination, as a smooth, raised area on the ridge of the nose, without redness or pain. Later became red and finally yellowish white in the center. Had crusts in the right nostril for one year previous to examination, but none in the left. Left nostril was stopped up and she had lost the sense of smell completely.

At the time of examination the lesion externally was softened in the center and its diameter was about 1¼ inches with the center raised about 3-16 inch above the level of the nose. Four days after examination, under gas anesthesia, the tumor was opened and cleaned out. A fistulous opening ran diagonally downward over the right lateral cartilage, as is indicated by the match in the photograph. There were two smaller fistulæ but the cartilages were not involved except on the surface. Within the nose the swelling of the septum and the anterior ends of the turbinates was great and yielded but little to adrenalin, showing that it was an infiltration and not an edema. A piece of tissue from the right nostril and some of the pus from the external wound were submitted to a pathologist who said the pus contained ordinary pus germs but the excised piece had the appearance of tuberculosis. A few days

*Read at the meeting of the Northeast Kansas Medical Society, Atchison, Kans., October 8, 1908.

thereafter a dermatologist saw the case and agreed with me that the case had more of the indications of syphilis. On March 3, treatment was begun. March 6 and 7 the tuberculin eye test was tried twice with negative results. She has been on specific treatment ever since. The external lesion healed in about three weeks with gauze drainage. It did not communicate with the nostrils by any opening. When the swelling had abated internally the left middle turbinate was removed and the anterior wall of the sphenoid sinus broken out on account of suppuration. At the present time there is a scar externally about half an inch long, ad-



Gumma of Nose.

herent to the underlying cartilage, but not giving a saddle-back effect. The septum was not perforated. In view of the numerous miscarriages and a stubborn tonsillitis following her first marriage, and also the fact that she had been married to her second husband only fourteen months, it is highly improbable that he could have been any factor in the case except a rather odd coincidence.

J. B. Kyle[1] says the nose is a common site for gummata and they are late lesions usually occurring ten to twenty years after infection. I would call attention to the similarity between the photograph of this case and the illustration in Kyle's book, at page 326.

W. L. Ballenger[2] says tertiary lesions develop from 3 to 25 years after primary infection.

There was probably a specific involvement of the attic of the nose long before the gumma appeared.[3]

501 Bryant Building.

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WHAT MAJOR OPERATIONS SHOULD BE ATTEMPTED IN PRIVATE HOUSES.*

By Ola Putman, M. D., of Marceline, Mo.

You will notice by the title of this paper that we are asked to consider what major operations should be attempted in private houses, which gives us a greater degree of latitude than if it had read—what major operations could be successfully done.

Before enumerating the major operations that I think should be attempted in private houses, a few words concerning operations in private houses might not be out of the way. In the first place I want to state that I am in favor of operating in private houses. While the hospital has many advantages over most homes for the immediate operation, the home on the other hand has some advantages over the hospital. The greatest advantage is that the patient is where everything is familiar; he feels he will in no way be neglected; he has nothing to worry him about his family; he does not have to be transported a great distance by wagon or railroad; the expense is not nearly so great nor is there so likely to be infection in the average home as in the hospital when the usual steps are taken to secure asepsis.

The house should be prepared for the operation. The room, where the operation is to be done should be large enough to accommodate six persons, the tables and stands should have a good light, and in winter should be warn. The carpets should be taken up, floors scrubbed, the curtains and pictures removed and the walls wiped with a damp cloth. If there is time, it is sometimes advisable to disinfect the room with formalin the night before. If this is done the room must be aired and the fumes of the formalin neutralized with ammonia. A kitchen table is better than a dining table, if it is not possible to have a regular operating table, as the kitchen table is narrower and will be easier for the operator and assistants to work over. The question of assistants is most important. There should be enough competent assistants to enable the operator to do the operation without having to bother with the little details that take up valuable time and increase the risk of infection. There should be an anesthetist who understands giving ether and chloroform, and can keep the patient well under, so that the surgeon will not have to stop while the patient vomits and then wait until he goes under again. There should be a doctor to assist in the operation to hold retractors and hemostats, one to sponge and one to hand instruments and take care of solutions

*Read before Linn County Medical Society, August 11, 1908.

and sponges. There ought by all means to be a competent nurse to help prepare the patient and take care of him afterwards. If the surgeon will provide himself with these assistants, he makes the operation much easier for himself and for the patient.

The people must be shown that major operations can be done at home and that they can be done at less trouble and expense than by sending the patient away to the city. If the doctor in charge does not care to attempt the operation himself and cannot get proper help at home, it is much better to have a city surgeon come to the house and do the operation than to send the patient away; it makes the next operation easier to arrange.

Unfortunately, there exists among some members of the profession, a feeling of jealousy that prompts them to send cases away rather than allow the operation to be done by some fellow practitioner. Instead of this attitude, there should be a feeling of courtesy that would prompt a doctor who has an operation to be done to invite other doctors to see the operation whether it is a major operation or not. There is not so much surgery done, nor is the county so large but that there would be a number of doctors who would appreciate an invitation to see other surgeons operate. Another reason why there is no more surgery done is because too much dependence is put in medicines. This is reflection on the doctor in charge. Many times when a correct diagnosis is made in a case that calls for surgical interference, the doctor will continue to treat a pelvic abscess with quinine or a fibroid with ergot and trust that the abscess will rupture spontaneously so as to drain outside, or that the tumor will at least cease to grow. Many such cases terminate favorably for the doctor, but a better result could have been procured by gaining the patient's consent for an operation. Even in a desperate case where the chances are against the patient's recovery, it is better to give him the one chance contained in an operation. If a doctor will tell the patient and family the truth and explain that he is willing to give the patient his one chance, then if the patient dies, the doctor will know that he has done his duty, and the family will know that all was done that could have been. Nor will the doctor lose anything in the estimation of the family and friends. They will have more confidence in him than before.

In this paper no attempt will be made to describe the operations or say when they are indicated; any effort of that kind would draw the paper out to an indefinite length.

The major operations that can be attempted in private houses can be divided into two classes: First, the emergency cases that are the result of direct violence, *i. e.*, high amputations, trephining, gunshot wounds, etc. These will not be discussed as it is so clearly our duty to take care of such cases that argument is out of the question. There is another class of emergency cases that are not the result of direct violence, but call for quick judgment, and, more often, immediate opera-

tion. This class contains the greatest number of major operations that we are called upon to do in private houses. Among these, I will name:

1. Obstruction of bowels.
2. Operation for appendicitis during attack.
3. Operation for mastoid disease.
4. Cæsarian section.
5. Ectopic pregnancy.
6. Strangulated hernia.
7. Tracheotomy.

1. There is little to say concerning ileus, but if the classical symptoms of obstruction are present and repeated high injections of water, with the patient in the knee-chest position, fail to move the bowels, then the operation should be attempted at once. The high mortality rate following this operation is often due to postponing it until the patient is too weak and the adhesions are too firm to be broken.

2. In the operation for appendicitis during the attack, we should be guided by the severity of the attack, taking into consideration the number of preceding attacks. If it is the first or second attack and the symptoms point toward rupture of the appendix the operation should be done and it will be easier than when the rupture occurs in a case where there have been several attacks before. There will not be so many adhesions and they are not likely to be so firm. On the other hand, if the appendix ruptures, after a number of previous attacks, the operation could be more safely postponed. The adhesions would have walled off the pus from the abdominal cavity.

3. Mastoid disease often calls for prompt interference. It is a life saving operation and does not demand the strict aseptic surroundings of other major operations. It is merely opening an abscess and can be done just as well in a barn as in a hospital, for after reaching the pus, the field of operation will necessarily become infected.

4 and 5. Without raising the question of when Cæsarian section or operation for ectopic pregnancy is demanded, I will only state that both operations can be safely carried out in private houses and are probably done there more often than in the hospital.

6. Strangulated hernia demands an early operation to be successful and no time should be consumed in transporting the patient to a distant hospital. The patient should be prepared for operation at once, after reduction under chloroform has been tried.

7. Tracheotomy is the last named of the emergency operations that should be classed as a major operation. When indicated, it should be carried out as quickly as the consent of the parents can be gained.

THE DOCTOR IN POLITICS; OR HIS CIVIC RESPONSIBILITIES.*

By E. G. Beers, M. D., of Springfield, Mo.

I do not claim to have anything original or startling to advance but desire to say a few words calling attention to a subject that, I believe, should interest doctors, as a body, more generally.

The time was when the doctor, as a rule, knew little of anything except his pill bag and the condition of his patients, and that quite unscientifically; the sciences of government, sociology, economies, criminology, public health and sanitation did not arouse him to action, if they even interested him. He considered politics dirty work and left the handling of such questions to men who, many times, knew nothing and cared less about the welfare of mankind as it is portrayed under the light of these sciences. He did not wish to mix in politics because of the stigma that would go with it, rather preferring to stay out and consequently letting the greedy, self-seeking ones seize for personal gain, rather than give service to the public as a matter of scientific consideration.

He was alone then, each doctor stood by himself, but during the last decade mighty strides have been made in the profession; it has been groping in the dark and is still feeling for light, but the day is coming when the organized medical profession of the United States is going to be a great power for good and its rights will be better recognized.

We are all doubtless more or less familiar with the workings of our American Medical Association, one of the greatest medical associations in the world, if not the greatest; the organization it has built up is alone a great achievement, but the fruits of that organization are to be greater. The object of the association, as set forth in the constitution, is: "To promote the science and art of medicine; contributing to this end, the association shall endeavor to unite into one compact organization the medical profession of the United States for the purpose of fostering the growth and the diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and the enforcement of just medical laws, of enlightening and directing public opinion in regard to the broad problems of hygiene and of representing to the world the practical accomplishments of scientific medicine."

This is a laudable object indeed, to promote the science and art of medicine, to bring it out of dark superstition, place it upon the broad,

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

solid foundation of scientific thought and truth, there hold it, pointing it out to the laity, making them realize and recognize that the practice of medicine is something more than the mere bread and butter proposition to the one pursuing it, and, on the other hand, show them that the doctor not only wishes to cure the disease but also wishes to assist and point out to the citizen, the community and the nation not only how to resist disease but how to make better and healthier men and women for our country.

So the medical profession is beginning to realize that the general public has not, can not and will not solve these questions of public health and sanitation which involve great sociological, economical and even criminal problems, and they are beginning to recognize their own responsibilities which have and do grow out of their peculiar training and experiences of life and the position they hold in the community.

As our forefathers looked upon politics the epithet of "dirty work" was probably quite appropriate, and no doubt many entered that field for purely personal gain, caring nothing for public interests. The fault lay with the doctors as well as with the other good citizens who failed to become properly interested and thus left room for the self-seeking, money-grasping ones. When public interests are made a study, are made a science, the qualifications and requirements to carry that interest through for the public good, should not be looked for in just anyone who has a fancy to fill his own coffers; he should be selected from the body representing the ones best qualified in that line. In other words let the doctors for the medical institutions and positions of our state be selected from our state and county societies. Let these societies be the nominating body and in a way act as an advisory board to these public positions.

So, our idea of the doctor being in politics, is to put to practical work through the medium of our organized profession some of the theories and ideas that have and will grow as we realize more thoroughly our civic responsibilities.

Charles A. L. Reed, of Cincinnati, (Chairman of the Committee on Medical Legislation of the American Medical Association), in a paper entitled "Medical Legislators of Two Republics," compared France and the United States in regard to the number of medical men who serve their country in official positions. In the French Senate and Chamber of Deputies, about 10 per cent of the members are medical men, while in the United States Senate and House of Representatives only about 1 per cent belong to the medical fraternity. He thought we might take a lesson from France and put more doctors in our legislative halls, where they could serve the public by giving to the questions as they come up, the benefit of their peculiar training and experience, and too, that of the organized profession which would be back of them.

By the profession thus having some of their own members on the legislative floors they could demand attention and consideration when

fighting bills which mean so much to the public health and welfare of the people. Doctors grown old in the profession and rich in the experiences of the world could find no better way of serving their community, state, nation and profession than that of working in legislative halls.

Dr. Reed asks the question: "How many of us have seriously considered the duty devolving on us to carry the intelligence we have acquired in the innermost recesses of hovel and mansion, of cottage and palace and to exercise that intelligence in the halls of legislation for the benefit of the people who have trusted us?"

There is no doubt but that the doctor comes as near learning the exact condition of the home and everything emanating therefrom, as any man. When we know the homes of a community, their strong points, their weak points, we know the strong and weak points of that community, that state and nation.

The second and probably the most important way for the doctors to be in politics, or fulfill their civic duty, is through their county, state and national societies making them a power in the community, standing as one and working for those things which affect the health and well-being of the people.

Many suggestions could be given and are presented from time to time which, if carried out throughout this state, would be of inestimable value to the people and to the profession.

Some time ago an editorial in the *Journal Am. Med. Assn.*, said: "The Government to-day, which does not preserve records of births, deaths and disease, is at least fifty years behind the times," and, "no European nation, however small or insignificant, would think of doing without vital statistics and proper registration laws." Vital statistics and morbidity reports certainly ought to be found in the well regulated state we would have Missouri to be. Pennsylvania not long since adopted a model law in regard to the protection of public health. A health department with a single official at its head, under the title of the Commissioner of Health, who holds a seat in the governor's cabinet, was formed. He holds the health of the state in his hands, as it were. All vital statistics are reported and kept on record by the department, there being local registrars throughout the state. Morbidity reports are made through the physicians to the department, thus keeping the department's finger, so to speak, on the pulse of the state.

A sanitary division looks after the proper quarantining of infectious diseases and sees that the sanitary laws are carried out.

The making and distributing of antitoxin for the poor and the filing of reports made by the doctor attending the case is another beneficent work done under this department. No water works system or sewer system in the state can be established without the department investigating and approving the plans.

A well organized board of health, or health department, with power like that to give it weight, influence and standing in our State, is something that we, as a State Society, can well afford to work for.

A system of well organized local, state and national boards of health throughout the United States, all co-ordinate, yet subordinate to the national board, would be of inestimable value to our country.

To sum up the whole thing, the county society should be the business agent of the physicians of that county. That it should be made of such a power that when any new movement is on foot and especially when there are hygienic and sanitary problems to be analyzed, the opinion and advice of the society should be sought, as much as any other fraternal or commercial body.

Let the business agent, as it were, be a good citizen of his community and do all the civic good he can.

Quite true we should not neglect our papers, reports of cases, etc. which we have been going over from year to year, for we can always learn something new about disease and its treatment, but let us get out into that broader field where we will treat not only physical diseases but civic, business, social and moral diseases, not specialists, of course, but handle them in such a way that our society can and will be a source of pleasure and solid satisfaction to its members and the citizens of that community, not alone in working for the other's good, but in doing that, helping ourselves,—looking after that self-preservation and improvement which are so necessary before we can give our best.

OPTOMETRY, OR THE PRACTICE OF MEDICINE MADE EASY.

By Llewellyn Williamson, M. D., St. Louis.

Under the number House Bill No. 411, there was introduced, February 10th, in the State Legislature, by Mr. Brasfield, a bill which deserves the earnest attention and the equally earnest opposition of every medical man in the State who desires to maintain the intergrity of his profession and its honorable position. This bill, the title of which is "An act creating a Board of Examiners in Optometry, and defining and regulating the practice thereof," purports to be an effort to establish a law governing the fitting of glasses by opticians; in reality its sole effect will be to allow any one dealing in spectacles to prefix the title "Doctor" to his name, and practice medicine on that most delicate of all special organs, the eye. This the optometrists, as they call themselves, deny, stating that their object is the measuring of refraction and the fitting of lenses, and in defense of the act, they put forth specious arguments as to the benefit that will accrue to the public, and upon the basis of these arguments they even have the effrontry to solicit the support of the medical profession, and it is a regrettable fact that, in some instances, physicians have endorsed the bill through a misapprehension of its real import.

We urge upon the doctors throughout the state to look carefully into this bill, for while at first glance it may not seem to be of particular interest to the profession at large, an analysis of its purpose, together with a knowledge of what has been done under similar provisions in other states, will show that instead of being merely a measure to license opticians in the fitting of glasses, it is in reality an effort on the part of unqualified men, to enter the medical profession by a side door, thereby avoiding the labor, expense, and education required of bona fide medical practitioners.

The optometrists, as they call themselves, state that they do not intend to practice medicine because they do not wish to prescribe drugs; but the prescribing of drugs is in reality a very small part of the practice of medicine. A glance at some of the literature of the various optical colleges gives one the impression that the practice of optometry, so-called, as outlined by the college courses, is very much indeed akin to the practice of medicine. These courses consist of the anatomy and physiology of the eye and its relation to associated organs and the sympathetic system; physical optics; physiological optics; lens building; muscular imbalance; *differentiating diseases from optical conditions; diseases of the eye;* strabismus; functional nervous diseases and their cure, etc., etc. If practicing the above subjects is not practicing medicine it is very difficult to tell where the practice of medicine begins. In addition, these com-

prehensive courses are given by the optical colleges, many of which are correspondence schools, in from three to six weeks, upon the completion of which some such title as Doctor of Ophthalmology, Doctor of Optometry or Doctor of Optics, is conferred, together with a "Handsome Diploma 16 by 21 inches," and all for a cost of from $10.00 to $25.00. It is this title of "Doctor," so easily and cheaply acquired, that the optician is anxious to secure, and it is solely to enable him to practice his trade under the title of "Doctor" that bills similar to the one now pending in the Legislature, have been introduced in various states.

The diseases of the eye and their treatment, together with the correction of refractive errors, are a very important part of the practice of medicine, and require not only a thorough general medical education, but a great amount of special preparation; and if men with worse than no training are to be admitted to their practice, it is reasonable to suppose that other men with a similar lack of training will shortly be admitted to practice other medical specialties. It is not an attempt at self-preservation which should lead medical men to an earnest resistance of this invasion of the profession, for whatever may be thought of us generally by the layman, the medical profession has ever been, and always will be, the most unselfish of all avocations. The earnest efforts now being made throughout the country to raise the standard of medical education and medical ability, are not being made for the protection of the doctor, but for the protection of those dependent upon the doctor's services. In nothing is the layman so ignorant as in the real value of the medical advice which he seeks, and in no field of human labor is he so open to the wiles of the charlatan. The sick and suffering go to a physician because they believe him to be a good one, but they have no way of judging of the quality of the services which are rendered. It is for their protection from inferior services and to conserve both the health and the purse of the sufferer as well as to maintain the high character of our calling, that doctors have been for years making earnest efforts to raise the standard of medical education to the highest plane. It is to protect the layman that Boards of Health are organized, that quarantine is established, that sanitary measures are introduced, that preventive medicine is practiced; and the physician is the only laborer who is daily and constantly attempting to curtail the source of his own income. It is an honor to be a member of a profession of which this may be said, and it is only right that members of that profession should guard jealously the portal of entrance into its ranks.

Now comes the optician, who has perhaps in connection with his jewelry store and by the aid of a catalog from a wholesale house, laid in a supply of spectacles, and endeavors to enter the medical profession. That his training, experience, and usual preliminary education are totally inadequate, goes without saying, and yet he has permission to do as much, nay more, than men who have worked long and hard to master the intricacies of their calling. He tells us that he does not propose

to treat diseases but only to remedy the mechanical defects in vision by the aid of lenses, but when an eye is presented to him with deficient vision, how is he to know whether this deficiency is due to mechanical defect in the refractive apparatus or to disease of the eye itself? The key-note to all treatment is diagnosis, and a correct diagnosis of an ocular condition before treatment is instituted is as essential as a correct diagnosis of a lesion in any other organ of the body.

Any one, who has had even a slight acquaintance with the practice of ophthalmology has seen numerous cases in which this failure to diagnose correctly, because of lack of knowledge on the part of the optician, has wreaked untold injury. Simple glaucoma, in which vision goes from bad to worse, is treated by various changes of lenses by the optician, or optometrist as he now prefers to call himself, until all chance is lost for arresting the process, and neuritis and retinitis are totally overlooked; the toxic amblyopias, in which everything can be accomplished if taken in time, are allowed to go on to atrophy; these and many others afflicted with diseases of the eye, are daily victims of the optician who is utterly incompetent to differentiate these affections but is taught to believe himself "able to tell at a glance" diseases from optical conditions. These cases are numerous enough, unfortunately, under the present system and will continue as long as people are foolish enough to trust the examination of their eyes, which is a distinctly medical procedure, to men with no medical training. How much more frequent will they be, then, when people are led to believe that every man who hangs a winking eye in front of his shop and prefixes "Doctor" to his name, is a skilful ophthalmologist? for to the lay mind the difference between ophthalmologist and optometrist, or oculist and optician, is very slight indeed.

House Bill No. 411 is a distinct encroachment upon the rights, dignity and honorable status of the medical profession, as well as an attempt to legalize the practice of men who are wholly incompetent to fulfill the obligations which the Act itself imposes upon its supporters. If passed, this Act would surely result in an increase of blindness and other permanent eye affections—the prevention of which is now being earnestly studied by the medical profession.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, M. D., Chairman. M. B. Clopton, M. D. M. C. Shelton, M. D.

EDITORIAL

THE CARE OF INMATES OF STATE INSTITUTIONS.

The deplorable condition of the State penitentiary, from the standpoint of health and sanitation, as disclosed by the report of the medical committee, composed of Drs. A. H. Hamel, F. J. Lutz and Wm. Porter, recently submitted to the Senate, affords a conspicuous example of the ineffectiveness of any system of control of our penal and eleemosynary institutions, as regards the sanitation and healthfulness of the buildings, when the responsibility for the intelligent and humane execution of the office rests chiefly upon the one who is in immediate charge of the institution. Under this system the appointee is generally a person whose influence in politics is an invaluable asset to the reigning political party, and must be paid for out of the spoils of war, *i. e.,* by an appointment to an office that will reflect some honor upon the incumbent or offer some monetary remuneration; or, better still, from the viewpoint of the prospective office holder, give both honor and monetary remuneration. With this method of apportioning the rewards that come from success at the polls, we have no criticism to offer, for as things are with us such a system is inevitable; and while it may be said that appointees have been, in the main, capable persons who possessed the qualifications for the proper execution of the ordinary affairs of the offices entrusted to them, even success in politics does not justify the over-riding of humanitarian considerations in the care and treatment of the inmates of our State institutions.

The recognition of the important functions performed by the medical profession in protecting the health and lives of the inmates of State in-

stitutions induced Gov. Folk to appoint a physician upon the board of trustees of every State institution, including all educational ones. And what ought not to be overlooked is the fact that this was the first time in the history of the State that the medical profession was accorded representation upon some of these boards. That this broad policy will be followed by Gov. Hadley is almost certain if the statements made by him in his public utterances are indicative of his intentions with respect to the conservation of the public health. But the appointment of physicians upon the boards of trustees of these institutions, wise and beneficial as this action is, is not alone sufficient to guarantee to the people the highest efficiency of service to the State.

In order to secure the best results in the care and treatment of the inmates of our State institutions, the State Board of Health should be charged with the duty of supervising the medical and sanitary conditions of these institutions and be given authority to inspect them at stated times and require reports from the officers in charge, at certain intervals, such reports to include an accurate statement of the vital and mortuary statistics of the institutions. To effect this enlargement of the powers of the State Board of Health, the county societies could use their influence to educate the people as to the importance of a wider latitude in the Board's functions. Such supervisory control by the State Board of Health would impose the responsibility for the proper medical and sanitary care of the inmates, on the representative medical body of the State,—the authorized channel of communications in regard to public health matters between the people and the legislature. Had such a system of supervision been in force, the frightful condition of the penitentiary as it is to-day would in all probability never have developed, or at least the legislature would have been made aware of the danger; and the responsibility in allowing this condition to remain uncorrected, would then have rested upon that body.

THE INDUSTRIAL ASPECT OF LONGEVITY.

An illuminating suggestion, fraught with large possibilities in the great work of preventing and controling disease, comes from Dr. Irving Fisher, of Yale University, in his address upon the "Economic Aspect of Lengthening Human Life," delivered before The Association of Life Insurance Presidents in New York, on February 5th. Dr. Fisher said it was his belief that "concerted action by life insurance companies to lengthen human life would mark one of the greatest steps, if not the greatest step, ever yet taken toward the improvement of human longevity." The statement is so truthful and the practical application of

the suggestion so full of great possibilities for good as to arrest the attention of every thinker in the field of preventive medicine.

After pointing out the general truth that the success of any movement is found only when it reaches the commercial stage, Dr. Fisher said that "philanthropy is keen to lead the way to reform, but becomes a broken reed if depended upon for its support continuously or on a large scale." The truth of this statement needs no exemplification by us and Dr. Fisher's appeal was addressed not to the philanthropic spirit of the officers of these companies but to the more alluring proposition of lower death rates and longer lives; that is to say, a lesser amount to be paid in death benefits and a greater amount in premiums. But the policyholder himself is not to be the loser by such an undertaking, for the very reduction of death rate and extension of time during which premiums must be paid would enable the companies to reduce the amount of the premiums and still show an increase of revenue.

Now as to the impetus which the coöperation of the life insurance companies would give to the work of preventing and controling disease, Dr. Fisher says, most truthfully, that "the mere announcement that insurance companies intended to improve health conditions would have an effect in improving those conditions. This effect would be felt in two ways: First, it would convince millions of the ignorant and indifferent that the public health movement must have substantial merit to be an object of interest by life insurance companies. In spite of the great progress of the health movement, there are still vast hordes of our people who know nothing of it. Knowledge of its merits is largely confined to scientific and medical men, who constitute only a small fraction of the population. * * * * * Second, every health officer, every food manufacturer, every milk dealer in the United States that heard of the intention of the insurance companies to improve health conditions would become ambitious to make a good showing. Local pride in every community would result in efforts to keep abreast of the best records and avoid the reputation for being an unhealthful place to live in."

In emphasizing the practical value of this suggestion, the analogous work of fire insurance companies was referred to and the fact instanced that fire insurance companies had found it profitable to spend large sums in ascertaining the best means of preventing conflagrations, and maintained expensively equipped laboratories for testing fire-resisting materials, fire-resisting devices, new apparatus and fire prevention in general. As a result of such a campaign of education against fire—the principal object being to save money—every business man has an intimate knowledge of the laws of protection against fire. How much greater would be the reward if the life insurance companies would adopt

the suggestion of Dr. Fisher and coöperate with the Committee of One Hundred in its fight against disease and death; for here the preservation of the health and life of the nation is the goal that is sought, and the cause of preventive medicine would be advanced through numerous channels, while millions of people, now ignorant of the great work undertaken in their behalf would soon be informed with a proper knowledge of how to protect themselves against many of the diseases that now cap the list in our mortality tables.

OPTOMETRY—HOUSE BILL NO. 411—A WARNING.

The attention of our readers is directed to an article by Dr. Llewellyn Williamson on page 580, in this issue, entitled "The Practice of Medicine Made Easy." Herein is contained a clear account of the efforts made by certain opticians in this State to appear before the public in a character to which they have no claim. A perusal of Dr. Williamson's article will indicate to any unbiased reader the pernicious results that would inevitably follow the enactment of this bill into a law.

It is no new thing for wholly unqualified individuals to attempt to enter the medical profession and it is the profession's duty to protect the public from charlatans of every type. This question concerns every physician in the state, as such a law would be an entering wedge to the legalizing of various forms of medical practice which must not be entrusted to any but qualified practitioners of medicine. The specious wording of the document in question, does not reveal its true character, which is to delude the public.

Let every member of the profession in the State of Missouri, who feels that the encroachment of unqualified individuals into the medical profession is an evil to be combated, make it his business to write to his representative and senator in the Legislature, condemning this pernicious measure.

The bill is House Bill No. 411, entitled, "An Act Creating a Board of Examiners in Optometry, and Defining and Regulating the Practice Thereof."

DR. McCORMACK COMING IN MAY.

Dr. J. N. McCormack, the national organizer for the American Medical Association, will spend several weeks in Missouri during the month of May and address open meetings in various counties under the auspices of the county medical societies. There can be no doubt of the

very great importance of the work Dr. McCormack is doing, not only as to its benefit to the medical practitioner himself, but also because of the great educational value to the public. Through these lectures the public is informed concerning many topics appertaining to the conservation of the health and vigor of the people and instructed in the reasons for the accomplishment of the numerous humanitarian measures that have engaged the attention of the profession since the reorganization of the American Medical Association. Some of the things Dr. McCormack is trying to do, and has succeeded in doing in other states where he has spoken, are:

1. To build up and strengthen the county societies throughout the country.

2. To abolish the evils which have resulted from jealousy, envy and discord inside the profession; to improve the business methods of the profession, and to impress the importance of this both upon the doctors themselves and their patrons.

3. To show, not only to physicians, but to the public as well, the absolute need of compact, effective medical organization, for the sake of both the physician, his patients and the people.

4. To enlighten and instruct the general public regarding the work, mission and aims of the medical profession. That these matters are grossly misunderstood is known to every intelligent physician.

5. To remove the unreasonable and unjust prejudices against the profession, as a whole, which exists in the minds of many otherwise intelligent people and to make plain the danger to the people inseparable from poverty in the profession.

In every state which Dr. McCormack has visited his addresses have been followed by an awakening not only on the part of the public but in the ranks of the profession as well, and the sympathetic coöperation from the people toward instituting reforms and securing legislation for the protection of the lives and health of the people has brought success which could not have been accomplished without such coöperation.

In our next issue we will publish the itinerary of Dr. McCormack.

REPORT OF VITAL STATISTICS IN SPRINGFIELD.

The city of Springfield has instituted a system of health reports through the health department and a record of births and deaths is now kept by the department. Previous to November, 1908, there were no effective ordinances covering the collection of these statistics, but through the efforts of Dr. Woody, the city physician, and the members of

Greene County Medical Society, several ordinances were passed and reports of births and deaths made compulsory. An effort is being made to secure an ordinance requiring the fumigation of rooms that have been occupied by consumptive persons. The first report of the health department in Springfield was made for the month of November, 1908, and shows an annual death rate of 7 per 1000. There were 2 deaths from consumption, 1 from smallpox, 7 from diphtheria, 14 from scarlet fever and a total of 20 from all causes. The Bertillion classification is used.

PERSONAL AND NEWS NOTES

Personal.—Dr. J. Geiger, of St. Joseph, has been appointed a member of the Board of Managers of State Hospital No. 2.

Addition to Mercy Hospital.—Mercy Hospital, in Kansas City, has completed the new addition to its building. The new building will be ready early in March and will provide room for one hundred additional beds. The cost of the new building is about $35,000.

St. Joseph Academy of Medicine.—After much discussion and several conferences, a number of St. Joseph's physicians met at Hotel Robidoux February 3rd, and organized an Academy of Medicine upon lines similar to the Kansas City and Chicago societies of the same name. The new body will not in any way hamper nor embarrass the county society, but rather be supplemental to it. The club feature will be an element of weight, and later a library will be added. The following officers were elected: President, Jacob Geiger; vice-president, A. L. Gray; secretary, John M. Bell. The Committee on By-Laws, W. T. Elam, J. M. Bell, W. L. Kenney and Jacob Geiger, will report at the next meeting. Committee on Entertainment consists of J. H. Sampson and L. J. Dandurant. The papers will be of a high class, thoroughly digested and will be published in the leading medical journals at home and abroad. The society will hold its meeting every third Wednesday at Hotel Robidoux. At the first regular meeting, February 17, Dr. A. L. Gray will read a paper on "The Etiology and Treatment of Eclampsia."

American Party, Sixteenth International Medical Congress.—As a large number of American physicians will attend the Sixteenth International Medical Congress to be held in Budapesth, Hungary, August

29th to September 4th, 1909, the following itineraries have been arranged to enable the journey to be made with the maximum of comfort and enjoyment, at fixed inclusive fares: Tour A provides for a direct trip, with short trips to Paris, Berlin, Munich and Vienna, with carriage drives, visits to the hospitals, etc., in addition to the stay in Budapesth during the session of the Congress, with return to Berlin and Hamburg (41 days, $395, including hotel and all expenses). Sail from New York August 12, by North German Lloyd S. S. "Bremen." Tour B presents an opportunity of combining a visit to Great Britain, Paris and some of the points of scenic interest in Switzerland, with the opportunity of returning direct from Budapesth to New York (60 days, $540, all expenses). Sail from New York July 24th, by White Star liner "Arabic."

The business arrangements of the tour have been placed, as before, in the hands of Thos. Cook & Son, the well-known tourist agents, which insures perfect and complete service for the trip, and relieves passengers from all troublesome details incident to foreign travel. Those delegates who attended the last meetings in Madrid and Lisbon will remember the excellent service afforded them. Rooms have been specially reserved at Hotel Hungaria, Budapesth, for this party, but as the number is necessarily limited, we would advise those contemplating the trip, to book at once and secure accommodations. For further information and copy of itineraries, apply to Chas. Wood Fasset, M. D., Krug Park Place, St. Joseph, Mo.

CORRESPONDENCE

To the Editor:

The Council on Defense of Medical Research of the American Medical Association is desirous of obviating, as completely as possible, any cause for complaint against animal experimentation. Much of the "evidence" cited by hostile agitators is taken from articles in journals devoted to the medical sciences. Instances are frequently cited in which it is stated that, as there is no mention of anesthetics, the work must have been done without anesthesia.

Will you not aid the Council in its efforts by very careful examination of articles submitted to you for publication, with especial reference to the use of words likely to cause misapprehension regarding the experience of the animals used for research? And in every instance in which anesthesia is a condition in the investigation, will you not point out to authors the importance of making that fact prominent? We hope that by the coöperation of all who are interested in the promotion of medical science, the development of a public opinion hostile to medical research may be checked and that there may be a growth of popular understanding of the aims, the methods, and the significance of the results of animal experimentation.

Walter B. Cannon,
Chairman.

[Contributors are requested to bear in mind the above suggestion when preparing manuscripts for publication.—Ed.]

To the Editor:

I am contemplating going abroad for post-graduate work about the first of May and am desirous of finding a colleague for the trip. I wish you would kindly assist me in some proper manner through the columns of the Journal Missouri State Medical Association in getting into correspondence with such a person arranging for a similar trip.

S. Sanford, M. D.

Palmyra, Mo., February 13, 1909.

OBITUARY

GEORGE ROLLA HIGHSMITH, M. D.

Dr. George Rolla Highsmith died suddenly at his home in Carrollton on January 14th, aged 60 years. He was born in Savannah, Ga., December 4, 1848, and two years later his parents moved to Lincoln County, Mo. Thrown upon his own resources early in life, his opportunities for obtaining an education were meager, but his studious habits enabled him to acquire knowledge that fitted him to teach school in the country district where he lived. At the age of 19 he took a course in the normal school at Kirksville and afterwards began the study of medicine, graduating from the Missouri Medical College (now Washington University) in 1875. Immediately after his graduation he located at DeWitt, Mo., where he practiced until 1888, when he moved to Carrollton and remained an active worker in the profession until his death. Dr. Highsmith was a believer in medical organization and this is evidenced by the numerous medical societies of which he was a member. He was president of the Carroll County Medical Society at the time of his death, president of the Missouri State Medical Association in 1899, and an ex-president of the Wabash Railway Surgeons' Association; he was also a member of Grand River District Medical Society, North Missouri District Medical Society, Tri-State Medical Society, Western Surgical and Gynecological Association, Missouri Valley Medical Society, International Association of Railway Surgeons, Atchison, Topeka and Santa Fe Railway Medical and Surgical Association, and the American Medical Association.

Dr. Highsmith was a strong advocate of higher education, not only as applied to the medical practitioner, but in all walks of life. He assisted in organizing the first county institute in Carroll County and was himself one of its leading teachers. As a physician Dr. Highsmith endeared himself to all who called upon him for relief in time of suffering, and his kind, sympathetic and genial nature made him a welcome counsellor at all times. The entire community in which he lived mourns for the loss of one who had become a dear and sure friend, and the profession is deprived of the services of one who was ever ready and able to render yeoman service in its fight against disease and distress.

Dr. John S. Logan of St. Joseph, died very suddenly as the result of an accidental fall on January 18, 1909. Dr. Logan was 77 years of age. He was born in Shelbyville, Ky., June 25, 1836, and received his early education at the Shelby College and the Kentucky Military Institute. In 1857 he came to Missouri with his stepfather and mother, who located at St. Joseph and here Dr. Logan took up the study of medicine in the office of Dr. Alexander Schue. Later he went to the Kentucky Medical School, from which he received his medical degree, and took a post-graduate course in the Jefferson Medical College. During the Civil War

Dr. Logan served as surgeon in the Union army, being assigned at different times to the hospitals in St. Louis, Evansville, Jeffersonville, Camp Holt, Ind., and Camp Gamble, near St. Louis. After the close of the war he returned to his home in St. Joseph but although he continued to interest himself in medical affairs, he did not again become active in the practice of his profession, but devoted his time almost exclusively to business and financial affairs.

CLARENCE F. ROBERTS, M. D.

Dr. C. F. Roberts, of Kansas City, Mo., died at his home after an illness of several months on December 27th, 1908. Dr. Roberts was born in Iowa, February 19, 1871, and two years later his parents moved to Winfield, Kansas. He was educated at the Southwestern University and obtained his medical degree at the Ohio Medical College in 1895. He served as an interne in the Good Samaritan Hospital for one year and then began to practice in Nevada, Mo., where he remained until 1901. In that year he moved to Kansas City, where he continued the practice of his profession until the time of his death. Dr. Roberts possessed all the qualifications that make for the earnest physician and kind counsellor in sickness, and he came to be recognized as a man of unusual strength and sound judgment in all his work as a practitioner of medicine. He was a member of Jackson County Medical Society, the Missouri State Medical Association and the American Medical Association.

BENNO BRIBACH, M. D.

Dr. Benno Bribach died at his home in St. Louis on January 29, after an illness extending over a period of two years. Dr. Bribach was born in Heuchwalde, Saxony, Germany, in 1846. He received his early education in his native country, and also studied in London. He came to Missouri in 1868, and in 1880 he graduated from the Missouri Medical College. He began the practice of his profession in St. Louis where he remained until the time of his death. Dr. Bribach was a member of the St. Louis Medical Society, the Medical Society of the City Hospital Alumni, the Missouri State Medical Associaiton, and the American Medical Association.

FIFTY-SECOND ANNUAL MEETING, JEFFERSON CITY, MAY 18-21, 1909.

PRELIMINARY PROGRAM.

SURGICAL SECTION.

Edward G. Blair, M. D. ..... Kansas City
"The Treatment of Parenchymatous and Exophthalmic Goitres."
Vilray Papin Blair, M. D. ..... St. Louis
"The Proper Age at Which to Operate for Clefts of the Hard Palate."
Rodney J. Bunch, M. D. ..... St. Louis
"Surgical Treatment of Amebic Dysentery by Appendicostomy."
G. Wiley Broome, M. D. ..... St. Louis
"Compound Fractures and Remote Effects Under Prevailing Treatment."
James Moores Ball, M. D. ..... St. Louis
"Dr. Adam Hammer, Surgeon and Apostle of Higher Medical Education."
W. H. Coffey, M. D. ..... Kansas City
"Excision of Lower Part of Rectum." Report of Case.
A. H. Cordier, M. D. ..... Kansas City
"Neoplasm of the Testicle."
G. W. Cale, Jr., M. D. ..... St. Louis
"A Case of Congenital Absence of the Gall Bladder, in Which Appendicitis Produced the Symptoms of Gall Stone Disease."
H. S. Crossen, M. D. ..... St. Louis
"Ectopic Gestation Symptoms in Gonorrhœal Salpingitis Cases."
Jno. McH. Dean, M. D. ..... St. Louis
"Dysmenorrhœa."
Wm. S. Deutsch, M. D. ..... St. Louis
"Stunts in Surgery."
Davis Forster, M. D. ..... St. Louis
"Ovarian Tumor Complicating Pregnancy, With Recovery After Operation."
Robt. M. Funkhouser, M. D. ..... St. Louis
"Some Remarks Regarding Gall Bladder Disease."
Pinckney French, M. D. ..... St. Louis
"Abdominal Incision."
George Gellhorn, M. D. ..... St. Louis
"The Causes of Amenorrhœa."
B. Clark Hyde, M. D. ..... Kansas City
"Report of a Case of Shoulder-Joint Amputation with Peculiar Sequelæ."
Ernst Jonas, M. D. ..... St. Louis
"Undescended Testicle and Malignant Degeneration."
Jabez N. Jackson, M. D. ..... Kansas City
"Membranous Pericolitis."
Walter C. G. Kirchner, M. D. ..... St. Louis
"Illustrative Cases of Intestinal Obstruction, With Remarks on Diagnosis and Treatment."
T. F. Lockwood, M. D. ..... Butler, Mo.
"Problems and Possibilities of a Country Practitioner from a Surgical Standpoint."
W. E. Leighton, M. D. ..... St. Louis
"Anæsthesia."

A. B. Miller, M. D. . . . . Macon, Mo.
"The Relation of the Physician and Surgeon in Appendicitis Cases."
C. C. Morris, M. D. . . . . St. Louis
"Practical Points in Abdominal Surgery."
J. H. Morroway, M. D. . . . . Ridgeway, Mo.
"Some Diagnostic Points."
Max W. Myer, M. D. . . . . St. Louis
"Regurgitant Vomiting, Due to Unusual Adhesions, Following Gastro-enterostomy with Pyloric Exclusion."
Ernest G. Mark, M. D. . . . . Kansas City
"Bladder Stone: Its Diagnosis and Treatment."
C. M. Nicholson, M. D. . . . . St. Louis
"A Study of the Action of Scopolamine-Morphine on the Heart, Liver and Kidneys, with a Report of Six Hundred and Fifty Cases of Scopolamine-Morphine Administered as a Preliminary to General Anæsthesia."
Archer O'Rielly, M. D. . . . . St. Louis
"Modern Ideas of Chronic Rheumatism."
T. E. Potter, M. D. . . . . St. Joseph, Mo.
"Intestinal Obstruction with Special Reference to Paresis of the Bowels."
Louis Rassieur, M. D. . . . . St. Louis
"Report of Two Cases of Injury to the Heart."
J. H. Roney, M. D. . . . . Lawson
"Skin Stretching and History of Cases."
Francis Reder, M. D. . . . . St. Louis
"Remarks on Tumors of the Parotid Gland."
Robert E. Schlueter, M. D. . . . . St. Louis
"Remote Effects of Abdominal Injuries."
M. G. Seelig, M. D. . . . . St. Louis
"The Physiology of Shock."
Jno. D. Seba, M. D. . . . . Bland
"The Open Method of Treating Infected Joints, with Report of a Case."
Wm. W. Stevens, M. D. . . . . Kansas City
"Anæsthesia."
C. H. Suddarth, M. D. . . . . Smithville, Mo.
"Radical Operation for Hernia; as Seen by the Country Surgeon."
J. H. Tanquary, M. D. . . . . St. Louis
"Fracture of the Neck of the Femur."
Luther A. Todd, M. D. . . . . St. Joseph
"A Critical Review of a Series of Appendix Cases."
A. H. Vandivert, M. D. . . . . Bethany
"The Country Doctor."
J. S. Wallace, M. D. . . . . Brunswick
"Modern Methods in the Surgical Treatment of Rectal Diseases."
C. W. Watts, M. D. . . . . Fayette
"Report of a Case of Osteosarcoma."
Charles Hodge Wallace, M. D. . . . . St. Joseph
"Unilateral Suppurative Infection of the Kidney."

The following have promised papers, but as yet have not submitted titles:

John Young Brown, M. D. . . . . St. Louis
Walter B. Dorsett, M. D. . . . . St. Louis
Bransford Lewis, M. D. . . . . St. Louis
Fritz J. Moenninghoff, M. D. . . . . Kansas City

PRELIMINARY PROGRAM.

MEDICAL SECTION.

Scott P. Childs, M. D. ..... Kansas City
Subject to be announced.

C. O. Dewey, M. D. ..... Breckenridge
"Progress in Medicine and Surgery."

William Engelbach, M. D. ..... St. Louis
Subject to be announced.

T. F. Frazer, M. D. ..... Commerce
Subject to be announced.

Frederick W. Froehling, M. D. ..... Kansas City
Subject to be announced.

G. E. Gwinn, M. D. ..... Bethany
"Catarrh of the Middle Ear."

J. Phillip Kanoky, M. D. ..... Kansas City
"Verucæ Plantares et Palmares."

John W. Marchildon, M. D. ..... St. Louis
"Serum Diagnosis of Syphilis."

H. S. Major, M. D. ..... Hardin
Subject to be announced.

J. S. Newton, M. D. ..... Butler
Subject to be announced.

J. B. Norman, M. D. ..... California
"Emergency Surgery in the Country."

W. A. Patterson, M. D. ..... Tipton
"Scientific Therapeutics."

EYE, EAR, NOSE AND THROAT SECTION.

D. C. Adcock, M. D. ..... Warrensburg
"Nasal Obstructions as Causative Factor of Disease of Ear and Throat."

C. Barck, M. D. ..... St. Louis
"My Operation for the Extirpation of the Lachrymal Sac."

Robert Barclay, M. D. ..... St. Louis
"Interesting Problems in Ear, Nose and Throat Practice."

Theodore A. Coffelt, M. D. ..... Springfield
"Irido-Cyclitis."

Fayette C. Ewing, M. D. ..... St. Louis
"Our Overstocked Instrument Case; a Plea for Operative Simplicity."

John C. Faris, M. D. ..... Pemiscott
"Adenoids."

Hal Foster, M. D. ..... Kansas City
"The Prevention of Ear Disease."

Max Goldstein, M. D. ..... St. Louis
"Lantern Demonstration of Anatomy and Pathology of the Accessory Sinuses."

John Green, Jr., M. D. ..... St. Louis
"The Art of Refraction."

P. I. Leonard, M. D. ..... St. Joseph
"Ocular and Aural Prophylaxis."

W. H. Minton, M. D. . . . . St. Joseph
"Ocular Diseases Due to Systemic Influences."
C. A. Moore, M. D. . . . . Springfield
"Reflex Disturbances of Hypertrophied Turbinates."
C. F. Pfingsten, M. D. . . . . St. Louis
"Labyrinthian Affections."
Barton Pitts, M. D. . . . . St. Joseph
"Ophthalmological Experience."
Wm. E. Sauer, M. D. . . . . St. Louis
"Otitic Sinusphlebitis and Thrombosis. With Report of a Case of Phlebitis and Thrombosis of Lateral Sinus and Jugular Vein."
H. G. Savage, M. D. . . . . Warsaw
"Nasal Obstruction: Some of Its Causes, Effects and Treatment."
Flavel B. Tiffany, M. D. . . . . Kansas City
"Glaucoma."
Charles Wyche, M. D. . . . . St. Louis
"Inspection of School Children with Special Reference to the Nose and Throat."
Llewellyn Williamson, M. D. . . . . St. Louis
"Penetrating Wounds of the Eyeball."

THE MISSOURI SOCIETY OF MEDICAL SECRETARIES.

PROGRAM.

1. The Missouri State Medical Association: What it Should Mean to Missouri Doctors. . . . . By Dr. W. B. Dorsett, St. Louis
2. What it Should Mean to the State at Large, ... By Dr. M. P. Overholser, Harrisonville
3. Scientific Work in County Societies. By Dr. W. T. Elam, St. Joseph
4. The Social Side of the County Organization, ... By Dr. H. S. Majors, Hardin
5. The Secretary's Work from a Business Standpoint, ... By Dr. E. N. Chastain, Butler
6. How to Interest the Eligible Non-Members in County Society Work and How to Get a Good Attendance at the Meetings, ... By Dr. A. H. Thornburg, West Plains
7. The State Journal: What Is Should Mean to the Individual Members. . . . . By Dr. L. W. Dallas, Hunnewell
8. What the County Secretary Can Do to Make the State Journal a More Forceful Element in Medical Organization, ... By Dr. E. J. Goodwin, St. Louis
9. Prosecution of Irregulars: The Experience of a County Secretary. . . . . By Dr. M. A. Smith, Gallatin
10. The Missouri Society of Medical Secretaries: Its Objects and Its Destiny. . . . . By Dr. A. W. McAlester, Jr., Kansas City

COUNTY SOCIETY NOTES

To County Secretaries:

I beg to remind you that a correct list of your officers for the current year should be mailed to this office without further delay, in order that a revised list of members in our organization may be compiled. Preparations are in progress for our meeting in May, due notice of which will be mailed each member. In the meantime, if any secretary has any suggestions to offer for the good of the order, the undersigned will be glad to receive them. Charles Wood Fassett,

Secretary, The Missouri Society of Medical Secretaries, St. Joseph, Mo.

CALDWELL COUNTY MEDICAL SOCIETY.

The Caldwell County Medical Society met in Breckenridge on January 20th. Dr. C. O. Dewey, the retiring president, in the absence of the president and vice-president elect, presided. The attendance was small on account of bad weather.

Dr. O. N. Thompson, formerly of Lock Springs, Daviess County, Mo., but now of Breckenridge, was admitted as a member of our Society on a certificate from the Daviess County Medical Society.

Dr. W. M. Duffie read a paper entitled "Implied Impressions," which was discussed by all present.

Dr. G. W. Goins read a paper entitled, "Rheumatism and Allied Diseases." The paper was well received and discussed by all present.

By resolution the councilor of the 12th Councilor District was requested to call a meeting of the physicians in this district to be held at Cameron not later than April 1st, for the purpose of organizing a district medical society.

The next meeting will be held at Hamilton in April.—Tinsley Brown, M. D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The Cape Girardeau County Medical Society held its regular monthly meeting on February 8th, at Cape Girardeau, with the following members present: Drs. Cunningham, Dalton, Henderson, Hope, Howard, Moore, Rosenthal, Schultz, Tarlton, Wichterich and Wilson.

The scientific work for the evening consisted of the following symposiums:

Scarlet Fever: History and Pathology, by Dr. Cunningham. Symptomatology, Diagnosis and Treatment, by Dr. Wilson.

Measles: History and Pathology, by Dr. Hope. Symptomatology, Diagnosis and Treatment, by Dr. Howard.

All the papers were discussed and the friendly spirit which prevailed showed that the county medical society was a good thing and that the members profited much by the meetings.—E. H. G. Wilson, M. D., Secretary.

GREENE COUNTY MEDICAL SOCIETY.

The Greene County Medical Society met in Springfield, January 22d, 1909, with a good attendance.

The newly elected president, Dr. Fuson, read his address. The treasurer made his annual report and the reports of various committees were heard.

Dr. Reinhoff presented a very carefully prepared paper on "Puerperal Infection," describing in detail the etiology and pathology. He also gave an extensive account of the different methods of treatment, both medical and surgical. The paper was thoroughly discussed by various members of the society.

MEETING OF FEBRUARY 12TH.

The auditing committee reported favorably on the treasurer's report.

Dr. Coffelt read a very interesting paper on "Inflammations of the Iris and Ciliary Body." He went into the pathology of the condition very thoroughly and dwelt upon various causes of the trouble, both constitutional and local, pointing out the means of differential diagnosis. The paper was thoroughly discussed by the members present.

MEETING OF FEBRUARY 24TH.

An interesting paper on "Diseases of the Prostate" was read by Dr. C. E. Fulton. A discussion of the paper followed, led by Drs. Fortner and Terry. Nearly all of those present took part in the discussion and the meeting was very interesting and helpful.

At the next meeting Dr. J. E. Tefft will read a paper on "Diagnosis of Diseases of the Genito-Urinary Organs." At the meeting following that, Dr. Wilbur Smith will read a paper on "Methods of Treatment for Diseases of the Genito-Urinary Organs."—J. E. Dewey, M. D., Secretary.

HENRY COUNTY MEDICAL SOCIETY.

The Henry County Medical Society met in regular session in Clinton, on Wednesday, February 17th, 1909.

The President, Dr. W. W. Gibbins, delivered an address on the good of the county medical society to all the members of the profession, both of the city and country. The interchange of ideas and the relating of cases for comparison of diagnosis and treatment, he said, are of the greatest advantage and broaden our knowledge of how to handle cases.

The address was discussed by Drs. J. W. Britts, W. M. Shankland and A. J. McNees, each speaking of the benefits derived individually by being a regular attendant and participating in the discussions.

Dr. W. M. Shankland related a case of hysteria with a fatal termination, but presenting no symptoms of any complication.

Dr. McNees spoke of a case of hysteria that at one time showed a few symptoms of encephalitis but is now improved.

Dr. Britts mentioned his method of treating a number of cases of throat trouble, recently under his care, in which he administered antitoxin as a preventive against diphtheritic development.

Dr. Gibbins related the histories of a number of cases similar to the ones reported by Dr. Britts.

Dr. James E. Neeley was present and spoke of the benefit he had received from attending the Tri-County Society as a member, and wished to join this Society; by vote he was gladly received as a member.—F. M. Douglass, M. D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY.

The Howard County Medical Society met at Fayette, on February 5th, and held a very interesting and profitable session. The following members were present: Drs. Burgwin, Givens, Wright, Lewis, Bonham, McGee, Moore and N. E. Smith.

Our District Councilor, Dr. A. R. McComas, paid us a visit at this meeting and in a very interesting talk emphasized the importance of the county medical society and its beneficial influence not only upon the members themselves in their professional work, but also as a factor in establishing closer relations between the physicians and the public. The Society enjoyed the visit of Dr. McComas very much and his talk has stimulated the interest of members in county society work.

Drs. C. W. Watts and N. E. Smith presented a very interesting case of osteosarcoma of the femur. Drs. Watts and Smith treated the case by operation on September 27th, 1908, and a second operation was later performed at a hospital in St. Louis. At present the patient appears to be in good condition and there is no evidence of a return. The wound has healed entirely and the cicatrix appears healthy. The Society requested Dr. Watts to report the case at the next meeting of the State Association.

Dr. N. E. Smith, of Fayette, was unanimously endorsed as candidate for the office of coroner of Howard County and the Governor was petitioned to nominate Dr. Smith for this office.

The Society also strongly endorsed the bill now before the General Assembly, providing for registration of vital and mortuary statistics for the State.

The next meeting will be held on the first Friday in March.—C. W. Watts, M. D., Secretary.

PETTIS COUNTY MEDICAL SOCIETY.

The regular meeting of the Pettis County Medical was held on January 11th at the office of Dr. Charles B. Trader, Sedalia.

Dr. S. G. Kelly read a paper on "Mastoids," the following members participating in the discussion: Dr. M. T. Collins, Dr. W. O. Dunlap,

Dr. C. Bohling, Dr. Trader, Dr. W. G. Cowan and Dr. W. J. Ferguson.

STE. GENEVIEVE COUNTY MEDICAL SOCIETY.

The Ste. Genevieve County Medical Society held its regular monthly meeting February 10, 1909, with President Hinch in the chair.

The application of Dr. Edwin E. Whiteside, of River Aux Vases, was voted on and he was unanimously elected a member.

The next meeting will be held on the second Wednesday in March. —R. W. Lanning, M. D., Secretary.

ARTICLES APPROVED BY THE COUNCIL ON PHARMACY AND CHEMISTRY.

LAMINOIDS FERRUGINOUS (NASCENT).

Each tablet contains iron sulphate and sodium bicarbonate in quantities equivalent to those of pilulæ ferri carbonatis (Blaud's pills), but the two salts are separated into two layers so that the formation of ferrous carbonate will occur only when the tablets are moistened. An excess of bicarbonate is present to neutralize the acid in the stomach.

Dosage.—The same as Blaud's pills. Prepared by Schieffelin & Co., New York.

LENNIGALLOL.

Lenningallol, $C_6H_3(CH_3CO_2)_3{=}C_{12}H_{12}O_6$, is triacetyl-pyrogallol obtained by replacing the hydroxyl groups of pyrogallol with acetyl groups.

Actions and Uses.—Lennigallol is said to be non-poisonous and non-irritating, but a mild and painless corrosive. It is introduced as a substitute for pyrogallol in psoriasis, lupus, acute and subacute eczema of children and other skin diseases. Dosage.—In 5 to 10 per cent. ointment with zinc oxide. Manufactured by Knoll & Co., Ludwigshafen a. R.

LIQUOR TRITICI.

A solution of which each Cc. (15 minims) is said to represent 1.75 Gm. (27 grains) of triticum repens in a menstruum containing 23.5 per cent. of alcohol.

Dosage.—4 Cc. to 16 Cc. (1 to 4 fluidrams) at intervals of from two to four hours. Prepared by Parke, Davis & Co., Detroit, Mich.

LITHIUM ICHTHYOL.

A lithium derivative of ichthyol. It is a dark brown mass, somewhat more consistent, but otherwise resembling ammonium ichthyol in appearance.

Actions and Uses.—It is an antiseptic and bactericide. It is recommended as a wound antiseptic and in syphilis. Manufactured by the Ichthyol Co., Hamburg (Merck & Co., New York).

LYCETOL.

Lycetol, $NH\begin{matrix}/CH(CH_3).CH_2\backslash\\ \backslash CH_2.CH(CH_3)/\end{matrix}NH.COOH.CHOH.CHOH.COOH{=}C_{10}H_{20}O_6N_2$, is a tartrate of a methyl derivative of diethylenediamine (piperazine).

Actions and Uses.—Lycetol is claimed to be a serviceable diuretic and uric acid solvent. It is said to be free from disturbing effects on the stomach and to be well tolerated for long periods. Dosage.—1 to 2 Gm. (15 to 30 grains), well diluted and preferably in carbonated water, sweetened with sugar if desired. Manufactured by Farbenfabriken, vorm. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

NOVOCAINE.

Novocaine, $C_6H_4.NH_2(COO.C_2H_4.N(C_2H_5)_2,HCl){=}C_{13}H_{21}N_4Cl$, is the monhydrochloride of para-aminobenzoyldiethylaminoethanol.

Actions and Uses.—It is a local anesthetic similar to cocaine, but said to be far less toxic than any of the cocaine substitutes. When injected subcutaneously it is said to exert a prompt and powerful anesthetic action, but the effect is not sustained. This may be remedied by the simultaneous injection of suprarenal alkaloid. Novocaine is not irritant. It is recommended in all cases in which cocaine is indicated. Dosage.—For infiltration anesthesia, solutions of 0.25 Gm. (4 grains) novocaine in 100 or 50 Gm. (3.2 or 1.6 ounces) physiologic salt solution, with or without 5 or 10 drops of suprarenal alkaloid solution (1-1000); for instillations and injections, solutions of 0.1 Gm. (15.4 grains) novocaine in 10 or 5 Gm. (150 or 75 grains) salt solution, with or without 10 drops of suprarenal alkaloid solution (1:1000). In ophthalmology, 1 to 5 to 10 per cent. solution and in rhinolaryngology 5 to 20 per cent. solu-

tions are recommended, with the addition of 6 to 8 drops of suprarenal alkaloid solution (1:1000) to each 10 Cc. (160 minims). Internally, owing to its feeble toxicity, it may be given in doses up to 0.5 Gm. (7½ grains) to adults. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a M. (Victor Koechl & Co., New York).

ORTHOFORM-NEW.

Orthoform-new, $C_6H_3.(COO.CH_3)(NH_2)(OH)$, 1:3:4$=C_8H_9O_3N$, is the methyl ester of meta-amidopara-oxybenzoic acid.

Actions and Uses.—Orthoform-new is a local anesthetic, resembling cocaine in its local action, but not penetrating the tissues on account of its insolubility. It has practically no action on the unbroken skin and produces no irritation except slight corrosion about the place of application. It is somewhat antiseptic and practically non-toxic in the usual doses. It is used internally to relieve the pain of gastric ulcer. Since it acts only on ulcerated surfaces, the relief of pain has been assumed to be evidence of the existence of an open ulcer. It has been applied locally as an analgesic to wounds of every description. It has been used in dentistry, in nasal catarrh, hay fever, etc. Dosage.—Internally, 0.5 to 1 Gm. (8 to 15 grains) in emulsion; locally, in substance as a dusting powder or mixed with milk sugar for insufflation, dissolved in ether and mixed with oil for pencilings, or as salve with wool fat (lanolin), etc. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

ORTHOFORM-NEW HYDROCHLORIDE.

Orthoform-new hydrochloride, $C_8H_9O_3N.HCl$, is the hydrochloride of meta-amido-para-oxybenzoic methyl ester.

Actions and Uses.—The actions, uses and dosage of this compound are similar to those of orthoform-new, which see. Manufactured by Farbwerke vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York.)

OVOFERRIN.

Ovoferrin is a solution containing 5 per cent. of an artificial proteid-product in which iron is present in the so-called "organic" or "masked" form (a form which does not give the iron-test directly). The solution also contains 10 per cent. of alcohol and some aromatics.

Actions and Uses.—Ovoferrin is not appreciably affected by the gastric juice, a 0.5 per cent. solution of hydrochloric acid liberating its iron very slowly and incompletely. The product ranks with the other forms of artificially masked iron, which are devoid of the local action of the soluble inorganic iron salts, and, according to some authorities, are more readily absorbed and utilized. Dosage.—8 to 16 Cc. (2 to 4 fluidrams) corresponding to from 0.03 to 0.06 Gm. (½ to 1 grain) three times a day. Manufactured by Barnes & Hille, Philadelphia.

OXAPHOR.

Oxaphor is a 50 per cent. solution of oxycamphor.

$C_8H_{14}\begin{matrix}/CHOH\\ \backslash CO\end{matrix}=C_{10}H_{16}O_2$, a derivative of camphor in which a hydrogen atom has been replaced by a hydroxyl group.

Actions and Uses.—Oxaphor is a depressant to the respiratory center, but is said to have no effect on circulation and secretion. It is recommended as a substitute for morphine in respiratory disorders, chiefly in cardiac dyspnea and asthma. It is said to have been used with advantage in renal affections, in emphysema, bronchitis, etc. Freedom from undesirable side effects is claimed as an advantage over morphine. Dosage.—2 to 3 Gm. (30 to 45 grains) of oxaphor in a little water, wine, syrup or other desirable adjuvant. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

PHENACETIN.

A name applied to Acetphenetidinum, U. S. P. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

BOOK REVIEWS

Diseases and Surgery of the Genito-Urinary System. By Francis S. Watson, M. D., Senior Visiting Surgeon to the Boston City Hospital, Lecturer on Genito-Urinary Surgery in the Harvard Medical School, Boston, and John H. Cunningham, Jr., M. D., Assistant Visiting Surgeon to the Boston City Hospital, Member of the American Association of Genito-Urinary Surgeons. In two very handsome octavo volumes containing 1101 pages, with 454 engravings and 47 full-page colored plates, mostly from original drawings. Price for the complete work: Extra cloth, $12.00, net; Half Persian Morocco, gilt tops, *de luxe,* $17.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

A new mark is set by this book in point of sumptuousness, and yet it is in entire harmony with its contents. The authors have provided a wealth of effective illustrations most artistically drawn and colored, and the publishers have executed them in their full value. They are vivid and realistic in high degree. The text is artistically printed to conform, and the result is harmonious and pleasing.

The importance of the subject warrants such a work. The male half of humanity has a multitude of diseases and shares a number of them with the other sex. The genito-urinary field is accordingly very broad and productive, particularly as the mental and physical urgency of these troubles forces the sufferers to seek relief. Immense progress has been made in recent years, and many diseases hitherto intractable or incurable have been transferred to the other side of the line. This work is not only one for the specialist, but also for the general surgeon and the practitioner who takes any cases in this borderland territory. It speaks with the highest authority, but simply and plainly and with full directions as to treatment.

The Principles of Pathology. Volume I. General Pathology. By J. George Adami, M. A., M. D., LL.D., F. R. S., Professor of Pathology in McGill University, Montreal. Octavo, 948 pages, with 322 engravings and 16 plates. Cloth, $6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

Adami's book admirably demonstrates the certainty that pathology will become a branch of science, not only of medical science, but also in the whole domain of so-called biologic investigations. The title of "Principles of Pathology," is well adapted to the trend of the author's representation of the subject. It conveys the thought that the stress is not laid on pathologic changes as such, but in their relation to the whole organism. In single problems this method has been followed in a number of publications and to extend it to the whole of pathology is the great merit of Adami. Naturally the inequality between the number of questions that have been answered and those that are as yet unanswered is greatly in favor of the latter. It is necessary, therefore, that the single subjects represented by the same author all have the same character when dealing with them, just as in Herbert Spencer's many volumes,

the first of which will say what the others will contain as to interpretation and significance of the problems. Nevertheless the single subjects are dealt with in a way that his consideration of their specialty as such, and the great ingenuity of connecting them with others is astounding.

The language and style makes its reading a pleasure, while impressing on the reader, and particularly the worker, the ways in which the nature of obscure and difficult phenomena can be made clear to the understanding. The book is said to be published for students and physicians. This is either modesty or a mistake of the author, for to read and be benefited by this work one needs a knowledge of the subject that students cannot be expected to possess and only specially trained physicians have. It is a book for any worker in pathology and general biology; it will elevate their appreciation of the offered opportunity to work with a wider interest in a seemingly limited range of objects. Adami's book is a classic, and with eagerness we will look for the second volume that is to contain what is usually called Special Pathology.

C. Fisch.

Modern Medicine. Its Theory and Practice. In Original Contributions by American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume V, Diseases of the Alimentary Tract. Price per volume: cloth, $6.00 net; leather, $7.00 net; half morocco, $7.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

This great work goes steadily forward to completion, the fifth of the seven volumes now being fresh from the press. It covers the field of Diseases of the Digestive System and furnishes a thoroughgoing and authoritative exposition of a group of primary importance. The convenience of having the whole of the great divisions of diseases in single volumes has evidently been borne in mind, and the same idea of logical classification and arrangement has been carried out even to the paragraphing, so that any desired item of information can be quickly found. Nothing could be simpler or better than the uniform presentation of each disease in sections dealing with the cause, pathology, symptoms, diagnosis, course and prognosis, and treatment. The paramount importance of the latter is recognized in the fulness with which it is considered.

Practical Medical Series; Nervous and Mental Diseases.—By Hugh Patrick, M. D., and Charles L. Mix, M. D., of Northwestern University, Chicago. Year Book Publishing Co. Price, $1.25.

The volume on Nervous and Mental Diseases of the Practical Medical Series contains articles covering all the work done along this line during the year1906-7. The men who read the standard medical journals, will be more or less familiar with a large part of the contents of this volume, as most of the subject matter has appeared in the best journals in the last year. The book is well written, has some very good illustrations and is completely indexed.

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ORIGINAL ARTICLES

RHEUMATIC AND GOUTY AFFECTIONS OF THE EYE.

By Joseph Whitman Sherer, M. D., Kansas City, Mo.

Since the terms rheumatism and gout were first used they have been confused and used more or less loosely. They are often used interchangeably, but more frequently, I think, at the present time, is the term rheumatism employed to designate certain symptoms, or groups of symptoms, which would more accurately be designated gout. The manifestations of gout to which I allude are called "atypical gout" by systematic writers. Since the affections in question appear to us irregular or atypical, if gout, and are almost universally called rheumatism by the laity, it becomes necessary for me to specify the distinctions which appear legitimate in the light of modern research.

Clients tell me almost daily they have had rheumatism, but very rarely indeed has any one told me that he has had the gout. Most authorities now agree that rheumatism is an infectious disease caused by a microorganism. Opinion is not altogether in accord as to the germ. The staphylococcus of Hermann Sahli, formerly mentioned in this connection, is now discredited, and a streptococcus is held accountable instead.

In studying the bacteriology of this subject I find that, in the last ten years, opinion has gradually crystallized upon a germ which is commonly called a streptococcus by German scientists and a diplococcus by Englishmen. A fair compromise, in terminology at least, is "micrococcus rheumaticus" as proposed by Beaton and Walker. This micrococcus was first described by a Frenchman, Triboulet, about ten years ago, and by a German, Wasserman, a year or so later. Paine and Poynton and Beaton and Walker then gave the matter their distinguished attention and

endorsement. It is explained that this germ resembles an ordinary streptococcus culturely but differs somewhat specifically from it. Remembering that there are about five hundred varieties of streptococci it can be readily seen how it might resemble some and differ from others. The micrococcus rheumaticus has been held responsible for acute rheumatic fever, chronic articular rheumatism, muscular rheumatism and gout. Whether these varying manifestations follow varying moods in the germ does not appear.

I believe that acute rheumatism may be correctly regarded as an infection and perhaps chronic articular and muscular rheumatism also, but these latter are not so definite. Of course this only concerns the ultimate cause. We must not lost sight of certain predisposing causes such as exposure to cold and damp, poor nutrition, over-work, fatigue, change of season, etc.

Gout, on the other hand, is generally considered to be a disorder of metabolism. The uric acid theory is widely but not universally accepted. Tyson says, "Gout is an acute and chronic constitutional affection, due to an abnormal accumulation of uric acid in the blood and tissues, causing various symptoms." Unfortunately this is largely theory, and much elucidation is still necessary, for uric acid has not yet been shown to be capable of producing gout when injected intravenously, or even to be toxic when thus used. Still, it is established that the phases of gout accompany the accumulation of uric acid in the blood whether wholly or partly due to it or not, or due to some other toxic principle present as a result of the diseased condition which it marks.

According to Bull, uric acid, coming as it does from the neucleoproteids, has two sources in the economy; first, from neucleins in food; second, from neucleins in cellular tissue through perverted metabolism. The latter only is increased in gouty individuals. A somewhat plausible theory is the production of toxæmia from the absorption of toxins from the intestinal tract where they are created by fermentative processes. The severe exactions of modern civilized life with its excitement and confinement and resulting impaired metabolism, imperfect elimination, and resulting toxæmia, eventuate in lithæmia or gout.

Of this large and intricate subject I merely wish to ask you to recall the predilection of rheumatism and gout for synovial membranes and the fibrous structures about articulations; and that neither rheumatism nor gout slight entirely the fibrous structures found in the orbital region, such as the sclera, the capsule of Tenon, and the tendonous and ligamentous tissues found here. Acute rheumatism but rarely causes serious trouble in any ocular tissue but chronic rheumatism and gout rather frequently affect the eye and I believe it is correct to say that almost none of the ocular tissues are entirely exempt from possible involvement.

A sufficient number of cases have now been reported to establish the fact that the lids with their glands and marginal structures, the conjunctiva, the muscles, the capsule of Tenon, the sclera, the cornea, the

iris, the choroid, the ciliary body, the retina and the optic nerve are occasionally attacked by one or other of these painful and insidious maladies. Paine and Poynton of London "in rheumatic fever, isolated from the cardiac valves, pericardial exudation, and rheumatic nodules after death, and from the blood, tonsils, synovial fluid, and urine during life, a minute diplococcus. This can be cultivated outside the body. * * * It will produce identical lesions in rabbits and the microorganism can be demonstrated in these lesions. * * * "In two instances iridocyclitis has occurred in rabbits as a result of the intravenous injection of the organism into the auricular vein." In both cases Paine and Poynton found iridocyclitis with plastic exudation and in the anterior chamber a cloudy fluid which contained a few leucocytes and which teemed with the diplococcus. A culture from this fluid injected into another rabbit produced chronic arthritis.

Here is at once a concise experimental demonstration of the microorganismal origin of acute rheumatism and a true rheumatic iridocyclitis. Those clinicians who have long claimed for rheumatic fever a place among the infectious diseases are thus vindicated and rheumatism becomes one of that group of micrococcal diseases which includes the pneumococcal, gonococcal, staphylococcal and streptococcal affections. All are characterized by many lesions and each possesses a distinct individuality of its own.

Gonorrhœa and pneumonia may be regarded as diseases allied to acute rheumatism. The gonococcus and pneumococcus are known to frequently and virulently attack the eye. Conjunctivitis and iritis are the forms chiefly assumed. My contention is that any of the cocci I have mentioned may cause conjunctivitis, iritis, iridocyclitis and some of them even destructive suppurative panophthalmitis.

Wright in his report of rheumatism of the extraocular muscles states that the tendons of the muscles are liable to attack, and that extensive swelling is thus produced; this swelling, however, is not nodular but rather of a raised, flat character. The appearance resembles scleritis or episcleritis. The affection yields rapidly to antirheumatic treatment and usually disappears with the disease of which it is an intercurrent complication.

I now come to speak of the relation of chronic rheumatism to the eye. About 30 per cent. of all iritides are estimated to be of rheumatic origin. In numerous cases the personal history reveals attacks of chronic articular rheumatism. One needs to heed the patient's recital of attacks of lumbago, sciatica, neuralgia, torticollis, erythema, or arthritis. These poor sufferers are remarkably susceptible to the influence of cold and damp and it is in winter and spring that they are most affected. In one group of cases the iritis alternates with the rheumatism, i. e., when the eye is attacked, the joints are free, and vice versa. In another group of cases the iritis comes on only with the rheumatism and recurs regularly with it. One or both eyes may be affected and it is no exaggeration to say that

recurrent iritis is nearly always due to rheumatism. Typical cases have, of course, the usual symptoms of iritis, viz., pain, which is very likely to be paroxysmal, photophobia, lacrymation, and ciliary redness. The pain has the tendency to radiate through the head and may become very severe. There is but slight tendency to exudation of lymph and the formation of synechiæ. When synechiæ do occur they are generally small and easily broken up. There is less likelihood than in syphilitic iritis for fine opacities to appear on the cornea and there is less tendency to the occurrence of hypopyon or hyphæma.

Brailey and Stevenson have described two subgroups; in the first, or neuralgic subgroup, the pain possesses a horrible violence and radiates through the various branches of the fifth nerve with a pertinacity worthy of a better cause. The second subgroup consists of those cases caused apparently directly by exposure to cold. The peculiarity here is that the attack may be brief, even of a few hours duration only, and then recur every time a similar exposure is experienced. Care needs be taken to differentiate between these and syphilitic cases.

The kindredship of micrococcal affections, alluded to above, is further evidenced to the thoughtful mind by the ocular diseases which arise from gonorrhœal rheumatism as well as from common rheumatism. I do not now refer to the purulent conjunctivitis which results from direct inoculation of the gonococcus into the conjunctiva but to the involvment of the deeper structures of the eye due to the presence of the germ in the general system and producing gonorrhœal arthritis, inflammation of different faciæ, as the plantar or palmar, and even painful affections of certain periphereal nerves, as sciatica.

In the eye the condition evolved is almost regularly an iritis or iridocyclitis of a serous type with the usual symptomatic phenomena attending serous cyclitis in general, i. e., dotted opacities deposited upon the inner surface of the cornea, fine opacities in the vitreous and a very limited exudation of lymph about the iris. The attendant pain, photophobia and lacrymation are rather mild. The type of the disease, like all serous iritides of no matter what source, is essentially slow, chronic, relapsing and recurrent.

In some cases there is a peculiarly regular sequence of events; first gonorrhea, then arthritis and last, iritis. In other cases there is a surprising alternation between the gonorrheal rheumatism and gonorrheal iritis, the transition from one to the other locus being astonishingly swift; the disease fairly flying from joint to eye and vice versa. It is singular that the individuals thus afflicted are almost invariably rheumatic, independent of gonorrheal rheumatism, and here again we are at a loss to know how much to attribute to the gonococcus and how much to the micrococcus rheumaticus, or how much to the combined action of both.

I wish to mention very briefly the effect of rheumatism and gout upon all the different ocular tissues, as some are prone to be overlooked,

but especially do I wish to emphasize and describe certain fundal conditions, some of which are common enough and others rather rare.

Shoemaker quotes Kalish as authority for stating that rheumatism is one cause of chalazia, hordeola and marginal blephritis. When of rheumatic origin they recur frequently and the inflammation and pain are generally disproportionate. According to Wagenmann chalazia are sometimes caused by gout. I have recently treated, and cured with sodium salicylate, a case of conjunctivitis, evidently gouty, in a bartender. The eye was excessively red, but little swollen, little painful, there was almost no secretion, slight photophobia and slight lacrymation and slight loss of function. His free libations were curtailed and recovery was complete in about a week. Conjunctivitis from this source assumes protean forms. Swan M. Burnett has described a most slow and tedious gouty conjunctivitis. Hutchinson has mentioned a gouty conjunctivitis which is hot and itching and is sometimes associated with episcleral congestion. Kalish has described a gouty, circumscribed, bulbar conjunctivitis. It frequently attacks the nasal side only. It comes on suddenly and causes a watery discharge which never becomes purulent or mucopurulent. It it liable to be mistaken for episcleritis. Another form is limited to the conjunctiva over one of the ocular muscles and simulates scleritis but can be differentiated from it.

Bilateral rheumatic inflammation of the lacrymal glands has been observed by Miller and was evidently of the gonorrheal, rheumatic variety. I will only mention, without describing, the ordinary scleritis and episcleritis, and partial, fugatious episcleritis, of rheumatic and gouty origin. The scleritis may be deep or superficial, or it may be a sclerosing keratitis or, a sclerokeratoiritis, both of which are very serious and very dangerous diseases. Tenonitis is very rare but when it does occur such able observers as Noyes and Bull agree that it is always rheumatic or gouty. The symptomatology is especially interesting but I have not space to enter upon it here.

Rheumatic ocular myositis is rare but its occurrence may now be considered established since cases have been reported by Gleason, Landolt and Landesberg. The symptoms must necessarily vary according to the violence of the attack and it should be born in mind that, aside from cases which show active inflammation, with redness, swelling and pain, there are cases, according to De Schweinitz, in which the leading symptom is paralysis or paresis. In these latter cases diplopia, dizziness and confused vision are the diagnostic signs. The intrinsic muscles may be affected similarly and then failure of the accommodation occurs. I believe that as a general rule ocular, muscular affections of the kind in question, coming on in young adults, can be safely said to be due either to rheumatism or to syphilis.

The occurrence of rheumatic cellulitis and osteitis of the orbit is debatable, but Swanzy is authority for the statement that rheumatic periostitis occurs in a chronic form without a tendency to suppuration.

Of inflammations of the optic nerve it is only in acute retrobulbar optic neuritis that rheumatism can be cited as a cause. Deyl, Elsnig and Shoemaker agree that it is the most frequent cause. The ophthalmoscope assists but little in making the diagnosis and the intuition of the diagnostician must chiefly be depended upon.

The relation between rheumatism and gout and glaucoma is not clear, but Nettleship and Priestly Smith both regard rheumatism and gout as causative of glaucoma, although Nettleship thinks gout rather more so. As to cataract I can only say that rheumatic and gouty subjects have cataract as well as other people but I believe it has not yet been shown at all conclusively that either rheumatism or gout are directly causative.

The fundal changes comprise retinitis, chorio-retinitis, and disseminated choroiditis. Following choroiditis iritis sometimes develops and a general uveitis supervenes. I wish to lay special stress upon the importance of angiosclerosis in this connection. Bull announces his conviction, after prolonged observation, that the vascular lesions found in the eye in these conditions are not directly attributable to gout but that both these and gout are the result of the faulty nitrogenous products of metabolism. In the chronically lithaemic condition in which there is a constant increased blood pressure a compensatory growth occurs in the blood vessels; this is later followed by a degenerative process. The stage of growth or fibrous construction is commonly called angiofibrosis and the following stage of degeneration, angiosclerosis.

In the eye angiosclerosis causes a characteristic conjunctivitis and, rarely, a diffuse oedema of the lids, but the deeper lesions of the uvea are of much greater frequency and much graver importance since they impair vision and may possibly lead to blindness from macular changes, cataract, or optic atrophy.

The capillary meshwork of the choroid is the finest in the body and here the blood current is very slow and the vessel walls are more exposed to the action of toxic principles than is perhaps elsewhere the case. Larger or smaller areas of reddish yellow exudation occur in the choroid and retina. At first there is swelling and later atrophy, so that eventually the white sclera can be seen. The area has a black pigmented border. As the retina becomes involved the vision becomes impaired. The "silver wire" artery tells us of changes in the vessel wall. While all three coats are thickened the greatest increase is in the intima and consists of a hyaline deposit. The adventia is also much thickened and here the change is a grandular one. The veins become very wide and tortuous, the arteries very narrow even to obliteration. They may look beaded at places, or aneurysmal dilitations may occur. Hemorrhages are frequent. These are liniar or flame shaped. An arterial pulse is often visible. In addition to numerous small retinal hemorrhages of a liniar or flame-shaped character, hemorrhages into the vitreous also occur. The optic nerve is liable to be simultaneously or consecutively involved with resultant optic atrophy. The nerve fibers in the retina and nerve

tend to become dropsical and the spaces between them are filled with a fine granular material. The oedema of the retina and nerve makes the disk outline look blurred and the fundal picture may possibly for a time resemble choked disk.

Otto, in 1901, first called attention to a circumscribed optic atrophy due to angiosclerosis of the internal carotid and ophthalmic arteries. The thickening and induration of the vessel walls impinged upon the nerve and caused so much pressure that atrophy of the nerve resulted. This process is evidenced by the occurrence of an atypical scotoma in the visual field which will assist in the diagnosis.

This subject is too large to be considered here in all its details. My object has been merely to call attention to some rarer and some more interesting points connected with it. The therapy contains nothing new to ocular therapeutics not already entirely familiar to all or to the treatment of gout and rheumatism in general so that it would be supererogation for me to attempt to discuss it.

INTERPRETATION AND TREATMENT OF HEADACHE.*

By W. A. Clark, M. D., Jefferson City, Mo.

A condition of pain in the head is one of the most common subjective symptoms presented to the physician by those who come seeking relief. I know of no symptom found in so many diseases which is so ignored and misrepresented as headache. It is found preceding, or some time during the progress of almost every disease to which human flesh is heir, whether the disorder be acute or chronic; and very frequently it is the only symptom of which complaint is made. It causes more aggregate suffering than those affections which lead to capital operations. There are none of us whose heads do not occasionally ache. I presume it has always been so. In *Romeo and Juliet,* the old nurse says:

"What a head have I; Lord how it aches; it beats as it would fall in twenty pieces."

And, again, Othello tells Desdemona:

"I have a pain upon my forehead here;"

to which she replies,

"Faith, that's with watching; 'twill away again; let me bind it hard; within the hour it will be well."

Notwithstanding the fact that it has always been an almost universal complaint, we do not know whether the pain is in the branches of the fifth nerve distributed to the dura, or whether it is caused by a disturbance of the circulation in the blood vessels of the brain; but we do know that the diagnosis of many obscure and rare troubles is easier than the true interpretation of an obscure cephalalgia.

The chronic sufferer from headache comes to the physician believing that somewhere in Gilead there is a balm whose magic properties will forever banish her pain if only she can find him who in his wisdom has discovered its potent virtues. She knows nothing of cause but expects some draught whole healing properties will cure her forever. The physician in his wider knowledge knows that her symptom may mean an organic lesion of the brain, that it may be caused by some reflex irritation, or some unbalance of the cerebral circulation; a forerunner of some fever, or a lesion in the kidney. He who listens to the patient's plaint suspects the stomach, gives a prescription for a stomachic or some coal tar product, pockets his fee and assures his patient that she will be relieved, is neither honest to his client nor wise to his own interests, and has done little more for her than she could do for herself

*Read by title in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

with the widely advertised ten-cent package so freely dispensed at the corner drug store.

The cause of headache may be and often is outside of a disturbed digestion or a functionally inactive liver. It will be wiser in most instances to explain something of this to the patient and secure her coöperation in arriving at the true cause of the disorder. The trouble with our diagnosis is that we do not go far enough. It has been said that the general practitioner assigns the headache to some cause and the specialist to some organ within his own specialty. Both can usually show some cause why such a course might be rational, but in many cases neither has made a diagnosis sufficient to support the assertion.

The introduction of the aniline products to the pharmacopœia has given us easy means for the relief of most headaches. I presume most of the so-called cures are composed of some combination of these drugs. They are powerful remedies; powerful for good when properly used, and powerful for evil when indiscriminately dispensed. I am persuaded that the profession does not use them with sufficient care in the treatment of headache.

The subject is not to be passed over lightly, for he who would be able to properly interpret headaches will need to be not only well grounded in general medicine, but will also need a fair working knowledge of most of the specialties.

Probably more headaches are due to toxemia, or the retention within the system of certain poisonous materials in the blood, than to any other one cause. A toxemic headache may result from the immoderate use of alcohol of tobacco, or from the inhalation of poisonous gases. It results from the poisoning from lead, from certain drugs, from urea, uric acid accumulation, malaria, autointoxication from constipation, and less commonly from diabetes.

The headaches from the inhalation of poisonous gases should be treated by whatever method will most rapidly eliminate them from the system, most frequently an active purge. The headache of chronic lead-poisoning is dull in character and should be treated as other forms of lead poisoning.

The headache of uremia is familiar to the general practitioner. He will be led to suspect the condition from the heightened arterial tension, the fact that it is associated with dullness, stupor, a tendency to heavy sleep and more or less œdema. An examination of the urine as a routine practice will make the condition clear. It is best treated by the hot-air bath, the administration of digitalis and brisk purgatives. Many individuals of the gouty habit, without actual classical gout, but with a thousand and one erratic symptoms, are the subjects of headaches which disappear when a proper alteration of habits and diet is made, and when placed upon suitable remedies for the elimination of uric acid. Editors, lawyers, doctors, ministers and literary men generally, who spend long hours indoors and have little opportunity to bring into use their voluntary

muscles are subject to lithæmic headaches. For the relief of the paroxysm Haig, who has written extensively on the subject, from his own personal experience, recommends the application of mustard and the internal administration of nux vomica or the aromatic spirit of ammonia, and for the interval treatment a milk diet and salicylate of sodium to clear out the stores of uric acid. The headache of chronic malarial poisoning differs from the other varieties in its periodicity, and could only be confused with neuralgia of the fifth nerve, which may occur at the same hour on successive days. Quinine in sufficient doses with the addition of arsenic and iron when indicated will surely cure, although they will need to be given in larger doses than are required for an ordinary case of chills.

The headache of cerebral anemia, or anemic headache, may depend on a general poverty of the blood—a systemic anemia—or it may be the sequel of various excesses, either of mental or bodily effort. The typical form is seen in women who are neurasthenic and bloodless. It is observed in aortic stenosis and after prolonged emotional excitement. The pain is constant and of a dull, heavy, pressing character, rather than throbbing. Sometimes it is felt only for a part of the day, and if so it will likely be in the afternoon when fatigued, but as a rule it is constant. The sufferer from this form of cephalagia is timid, depressed, and has a dread of things that are not likely to happen. The digestive functions are deranged, the tongue coated, and there are the usual symptoms of gastric disorder. The pain is commonly referred to the vertex or forehead, but it may be over the entire head. Lowering the head is frequently palliative, though it is not always so. Hæmic murmurs are frequently heard over the heart. During an acute exacerbation of the pain an anemic headache will frequently give a flushed face and throbbing vessels, and if seen only at such a time may easily lead one into the error of thinking there is congestion rather than anæmia. On the contrary, cases of extreme anæmia are frequently met which are not accompanied by headache at all; so it seems that some disorder of the nervous elements, as well as a deficient supply of the blood, is necessary for its production. Caffeine will give the quickest relief from this form of headache, and is frequently of service while we are toning up the system along the classic lines laid down for the treatment of anæmia.

The headache of cerebral hyperæmia, or congestive headache, is seen most commonly in plethoric individuals past middle life, who are given to over-indulgence in food and drink. Anything that produces an excess of blood throughout the system, or that causes a mechanical disturbance to the circulation, predisposes to this variety. The pain is felt over the entire head, and is throbbing or bursting in character, the arteries are full and pulsating, and the veins swollen and tortuous. Frequently the pulsations in the temporal arteries may be seen at some distance. The head feels hot, the face is flushed, and the conjunctivæ injected. Raising the head relieves, and lowering aggravates the pain. In searching for the cause of this headache every organ in the body

where the blood pressure may be raised must be taken into consideration, especially the heart, kidneys and liver, and in women the menopause and catamenial periods must be thought of. Frequently acute febrile conditions, as, for instance, an attack of bronchitis, will cause a congestive headache, when every spasm of coughing will increase the pain many fold. One of the best known varieties, I dare say, is that which is felt in the morning after a too free indulgence the night previous. Persons who have suffered from a partial or complete sunstroke are prone to a recurrence of congestive headache on every return of the heated season. To relieve the immediate symptoms a brisk laxative for its revulsive effect, a hot mustard foot bath, the application of cold to the head, with aconite or some form of bromide, is the proper treatment. During the interval of the attacks we will endeavor to relieve the blood pressure and reduce the general plethora of the patient by appropriate diet and exercise and the interdiction of all stimulants.

Sympathetic or referred headache is one of the most puzzling varieties, because of the numerous causes that may produce it. It is a well known fact that slight errors of refraction, diseases of the ears or nasal passages, uterine disease or gastro-intestinal catarrh may cause prolonged and distressing head symptoms. It is important, therefore, if a superficial examination, that can be made by any general practitioner, shows the eyes to be imperfect, or if the pain is induced or made worse by their use, and if the pain is over the brow and forehead, or occipital, that the eyes be carefully examined, their defects, as far as possible, corrected by proper glassing and the patient placed in addition upon some form of rest treatment. So-called eye headaches are in many cases fatigue headaches, and mere correction by glasses does not always afford the promised relief, which is only obtained by giving the wearied organs and nervous system more or less prolonged rest. In cases of doubt, an examination by a competent oculist is a great satisfaction to the physician, but the number of patients who return from the oculists without glasses and a statement that the eyes are not at fault are not as numerous as the fabled leaves of Valambrosa, while those who after a few weeks' or months' absence return with glasses, still complaining of their headache, and with their tempers disturbed at the extra and to them unnecessary expense to which they have been subjected, are somewhat numerous. Still it is far better that the errors of refraction be corrected, however slight, regardless of whether it relieves the head or not. It is a well known fact that abnormal conditions within the pelvis will cause a referred headache. I know of no such thing as a uterine headache *per se,* meaning by that term a headache pertaining to any certain uterine ailment. The pain in the head from uterine disease is occipital or vertical, and pressure will give temporary relief. Given a vertex headache in a woman, which pressure relieves, it is rational to suspect the uterus or ovaries; yet it is not well to promise too confidently that the replacement of a deviated uterus, or the removal of diseased ovaries, will cure, for it sometimes does not. Anything that will cause a distension

of the sinuses of the nose, thus causing intranasal pressure, will cause reflex headache, referred to the forehead, temples or vertex. In this condition a hint may be obtained if we remember that the inner orbital wall and eye-ball are sensitive to pressure, and that artificial stimulation of the nasal chambers causes aggravation of the head symptom. Pain in the head from gastric irritability is dull and heavy and usually frontal. It is frequently accompanied by disturbances of vision, dizziness, sometimes nausea and vomiting and other symptoms of gastric catarrh. An emetic or a brisk saline laxative will often afford prompt relief, after which small doses of sodium bromide will be in order.

Migraine is a type of headache so distinctive in its phenomena as to be easily recognized, and the diagnosis will generally offer no difficulty. The attacks of sick headache are periodical, coming once a week, once a month, or less frequently. The pain is usually manifest in the first division of the fifth nerve as a small sore spot which rapidly increases until it spreads over one side of the head hence the name hemicrania. Soon after the onset of the pain, nausea and vomiting or intense retching come on; the pain reaches its intensity in from three to five hours, sometimes associated with spasm of the muscles of the affected side. The attack lasts from six to twenty-four hours, leaving the patient in a weakened condition from which it takes him several days to recover his accustomed vigor. A hypodermic of morphine relieves the paroxysm promptly, but must usually be avoided for fear of drug addiction, and also on account of the depression and digestive disturbances which follow its use. The aniline products have largely superceded all other drugs for this purpose, and are efficient. The patient should always lie down for a time after their administration. If this is impossible it is safer to rely upon some drug less powerfully depressant, as, for instance, caffeine or bromide. In the interval of the attack every case should be carefully investigated to discover if possible the causal condition. Digestive disturbances, eye-strain, mental and physical fatigue, affections of the nose, and menstrual disorders seem to be exciting causes, but in fully as many cases nothing can be found to account for the trouble. The administration of cannabis indica in increasing doses, and for a long time, is highly recommended, but the preparations are, unfortunately, of uncertain strength.

Headache, the result of gross lesions of the brain, or of the vessels or membranes of the brain, is classed as organic. It is observed in meningitis, cerebral softening, abscess, brain tumors, etc. This variety must be recognized by its persistent character, and the associated symptoms of the primary disease, such as optic neuritis, mental aberration, facial paralysis and vomiting without discoverable cause. Syphilitic headache will be diagnosed by the luetic lesions, its somnolent character and the magical effect of anti-syphilitic remedies. It is not to be forgotten, however, that some cases presenting most of the symptoms of periodic headache are really dependent on organic lesions, and furthermore it must be remembered that antiluetic remedies frequently afford

temporary relief in organic cases that are not of specific origin. In cases where there is doubt an examination of the eyes by disclosing an optic neuritis or a swollen disc will frequently clear up the diagnosis. The treatment, of course, is that of the underlying cause. Frequently everything fails except morphine, which unfortunately is dangerous to use. We might have good hope of recognizing this variety when found were it not for the fact that we occasionally meet with a headache in healthy young people whose lives and family history preclude any suspicion of luetic taint, and whose subsequent history refutes any suspicion of lesions of the brain substance, who have a persistent, excruciating headache, which quiet and rest do not relieve, and which is not affected by aperients. The patient rises with it in the morning and it lasts till night, and if he wakes in the night it still aches. The head is not tender, there is no vomiting nor ocular symptoms. It is not migraine, for the patient may have attacks of migraine superadded. It occurs in men as well as women, mostly in young adults. Possibly as good a name as any is constant headache. The treatment of the affection at best is unsatisfactory. Change of scene and travel are beneficial in some cases. Bichloride of mercury in minute doses is said to do good, as also the continuous administration of cannabis indica. Several surgeons have trephined the skull for its relief, with reported good results. We know nothing definite as to its cause.

Persons who suffer from neurasthenia are subject to headache varying from a mere source of discomfort to a severe blinding pain. In hysteria we have a characteristic variety, known as the clavus hystericus. For the treatment of these we must give our first attention to the general condition of the patient, as we can do little more than give temporary relief until the general run-down condition of the nervous system has been corrected, which will be most often accomplished by some form of rest cure. Neuralgias, resulting from exposure to wet or cold, frequently give a severe headache extending over the entire scalp and in these we may expect the best results from the coal tar products which it will be well to combine with salol or sodium salicylate. Occasionally we will meet with a rheumatic condition of the aponeurosis of the occipetofrontalis or temporal muscles, the pain characterized by intense severity, extending into the jaws and teeth, in which we will get good results from iodide of potassium, salicylate of soda or colchicum.

Children are far more subject to headaches than is generally supposed, and a close observance will enable us to detect many of the varieties of adults in those of tender years. A noted French professor once said that were he examining candidates for graduation and should ask for a cure for chronic headache, and the pupil did not mention iodide of potash he would put him back six months and give him time to think the matter over. This is probably an extreme view, but illustrates the idea intended to be conveyed by this paper, viz: that we should give more attention to discovering and removing the underlying causes of this exceedingly disagreeable trouble, rather than to palliative measures.

THE GENERAL PRACTITIONER IN THE COUNTRY.*

By George R. Highsmith, M. D., of Carrollton, Mo.

I have a friend living in a nice country town of about six thousand inhabitants, who is proud to be known as a general practitioner. I made his acquaintance at medical college. He was one of the few members of the class who had received a college education before beginning the study of medicine.

As a young man he was a fine looker, six feet tall, a fair skin, dark hair and eyes, and carried a dignified air. We all liked him and predicted he would be a successful practitioner. He was a favorite with the younger members of the faculty, always answered promptly and correctly at the quiz; but when we visited him at his room he was apt to be found with a book of poetry, fiction, or a work on general literature, rather than a medical text book in his hands. He explained that the young doctor who began his medical career with little knowledge outside of the medical text books would be rightfully regarded as knowing but little medicine. "It is the all 'round man who succeeds best, in medicine as elsewhere,—the physician who is thoroughly informed in his own work, and who knows, besides, something regarding the things which are of vital interest to others," he would say.

I made a visit to him several years ago, an account of which was read at a meeting of "The Western Surgical and Gynecological Association" at Omaha in 1898. This paper was entitled "A Day in the Country With a General Practitioner." It was published in the *Journal A. M. A.*, and was well received by the profession.

I have thought that some more literature along this line might be of interest, especially as the general practitioner is becoming quite scarce, even in the rural districts. I have had the matter in contemplation for several years, but have been very busy and have had but little time for the preparation of papers to be read at medical societies.

My idea is that these papers should endeavor to picture the life of the general practitioner in the country; to indicate the nature of the cases he has to deal with, especially those possessing unusual features; what he does for the patient, and how he does it. They should show the relation of the country practitioner to his environments; education, the church, morals, and social affairs in the community. On the special occasion which I desire to detail in this paper, we had met at the State Association, and as it was on my way home my friend insisted upon my visiting him for a few days. Being a bachelor, and having at home, no "eye to mark my coming and grow brighter when I come," I readily accepted the invitation.

*The manuscript of this paper was received several weeks before the death of Dr. Highsmith.—Ed.

I want to say in this connection that my observation indicates that the single man seems to need more relaxation from the daily hum-drum of the practice of medicine than does the married man. I spoke to my friend about it and he offered this explanation: "The married man whose domestic relations are pleasant, has an infinite source of relaxation by intercourse with his family at the daily meals and around the hearthstone in the evening." To quote the language of Washington Irving: "His spirits are soothed and relieved by domestic endearments, and his self-respect kept alive by finding, that though all abroad is darkness and humiliation, yet there is still a little world of love at home, of which he is the monarch. Whereas, the single man is apt to run to waste and self-neglect; to fancy himself lonely and abandoned, and his heart to run to ruin, like some deserted mansion for want of an inhabitant."

> "The treasures of the deep are not so precious
> As are the concealed comforts of a man
> Locked up in woman's love."

Before we left the place of meeting, the doctor sent the following telegram to his wife:

"Will return at three p. m. Have office opened. Dr. B. accompanies me."

When we arrived at the office several patients were in the waiting room. Among them was noticeable a rather well dressed, intelligent appearing young man about twenty-two years of age.

This doctor keeps a number of folding screens about his office. He uses them to stretch across the corner of his consulting room for patients to retire behind to arrange the clothing for an examination when necessary. I took a seat behind one of these screens, that my known presence might not embarrass the patient, and that I might profit by overhearing the conversation between doctor and patient, and assist when necessary. The other patients were soon disposed of and the young man entered. He took a seat, cleared his throat several times. After waiting until the silence became almost painful, he said: "Doctor, can you keep a secret?" "Well, yes," said the doctor, "if it is a professional secret; otherwise you entrust it to me at your peril." "Well," said the young man, "I have a slate pencil in my bladder. Can you get it out?" "O, yes," said the doctor, "I can get it out." "How will you do it?" said the young man. After learning that he was a school teacher, living in an adjoining county, that the pencil was about two inches long, was worn oval at each end, that it had been in his bladder six days; that during the first four days he pursued his duties as a school teacher and suffered no inconvenience, but that during the last two days he suffered considerable pain, the doctor said: "The probability is that I will have to cut it out; in that event you will be laid up several weeks." "I want to notify my parents, but do not want them to know what is the matter with me. Can you arrange that?" said the young man. "O, yes," said

the doctor, "that will be easy." He then sat down to his typewriting machine and soon produced the following:

"Mr. E. Z. Fulhd,

Lucky Point, Mo.

Dear Sir:—Your son, Cracker Jack, is now in my office. I have just discovered that he has a stone in his bladder. The conditions are such that it will be necessary to perform an operation immediately, for its removal. I will operate to-morrow morning. It will be necessary to keep him very quiet for several days. I will notify you if it is necessary for any of the family to visit him. I am,

Very truly,

A. Smewth, M. D."

The young man read the letter and approved its contents. The doctor then said he would try an experiment which might possibly obviate the necessity of an operation. He procured a three-quart fountain syringe, filled it with a warm solution of boric acid, attached a large sized rubber catheter to the outflow pipe, hung the syringe about a foot higher than the patient's head, introduced the catheter in the bladder. "Now stand," said the doctor, "and let this run as long as you can hold a drop; when I remove the catheter strain as hard as you can."

In a few minutes the patient indicated that he could hold no more. The doctor very quickly removed the catheter. The stream started, but almost immediately stopped. The patient began to reel, fainted and fell into the doctor's arms. By my assistance we soon placed him on his belly upon the floor. He revived as soon as he reached the horizontal position, placed his finger on the perineum and gleefully: "Its coming; its coming," he shouted. Before the doctor could get a towel to catch the outflow the pencil shot out on the floor. The young man seized the ends between the thumb and forefinger of each hand, sprang to his feet, arched his arms above his head and proceeded to dance a very good imitation of the Highland fling. The doctor waited until the enthusiasm had somewhat subsided. He then examined the pencil to see that it was genuine. It measured exactly two inches. A deposit from the urine had begun to incrustate its surface, indicating that it might not have passed so easily if he had waited a little longer.

The patient then inquired as to the amount of the fee. "I think you ought to pay me about fifty dollars," said the doctor. "*Jewhillikins,* doctor; isn't that too much money to make in a few minutes?" "Maybe it is," said the doctor. "It won't be much trouble to put it back and perhaps you can get some one else to remove it cheaper." "No! No!" said the young man, "here's your money; I would not have it back there for all the gold between here and sunset." The doctor pocketed the fee, remarking as he did so: "A fool for luck; that experiment might be tried every day for a thousand years without so fortunate a result."

It was now about five o'clock p. m. and the doctor gave notice that by the time we could get home and remove the dust and travel stain from our clothing and countenance it would be the dinner hour. I want to remark that the doctor had grown grayer and somewhat stouter since my last visit. I called attention to this fact, and was notified that the same changes were observable as to myself. It is a curious fact that we note the changes in our friends but do not appreciate the fact that we ourselves grow old also. His wife had also grown a little gray and more matronly in appearance. The doctor had been away three days. The reception by his family indicated the affection and esteem in which he is held. The country practitioner holds so close a relation with the families with whom he is associated that he is able to understand and appreciate the affection which is born of mutual respect and confidence.

My reception was such as I had a right to expect from the wife of my dearest friend, who understands and appreciates our relations. The wife informed the husband in relation to parties who had called for him professionally in his absence, also that two hens had hatched and were ready for the brooding coop, that two others were ready to begin setting, detailed social and church gossip, etc., but in such a manner that I did not feel neglected.

Inasmuch as we had lost a good deal of sleep at the State meeting in our efforts to ascertain if Dr. Binnie and Dr. Fulton, of Kansas City, could play "high-five," we went to bed early and got up late the next morning.

When we arrived at the office we found a young woman awaiting the doctor's arrival. We entered through the consulting room. I took my position behind one of the screens and the young woman entered.

She sat quietly for some time. After heaving several sighs of considerable size she began to weep. "What's the matter, my child?" said the doctor. "O, doctor, I have missed my monthlies!" "How long?" said the doctor. "About three months," she replied. "Well, that's nothing to cry about," said the doctor. "But, doctor, I am afraid there is something awful the matter." "Do you feel sick?" "No, not particularly, except since yesterday I have had pain in my stomach at times, had some watery discharge, and I think I am bloated." "Get up on this chair," said the doctor. About this time I involuntarily sneezed. "What's that?" said the young woman. "O, that's Dr. B.; its all right; he went behind that screen to take a chew of tobacco; besides I wanted him to hear what we said to each other. The reason why I wanted some one to be present and hear what we said, is that I saw you come out of Dr. R.'s stairway yesterday afternoon as I came up from the depot. You have been doing wrong. I want you to tell me the truth. Did you go to Dr. R. to have some operation performed to bring you around?" "Yes, I did. O, doctor, I wish I was dead. Can you save me? I do not want to die in my sins." "Get up on this chair and I will investigate." After making a thorough examination the doctor said: "You are about

to miscarry. You will have to go home and tell your mother all about it. If you have severe pain, or hemorrhage, or a chill send for me, and I will perhaps be able to save you. Now be sure to make a clean breast of the whole matter to your mother, and be prompt to send for the doctor if either of those three things happen."

After she had gone the doctor said: "I smelt a rat when I saw her in Dr. R.'s stairway. He is a red-handed assassin. He introduces a probe in the womb and sends the patient home with directions to send for her family physician when the trouble comes on. He gives her special directions not to mention his name in connection with the case. They seldom do mention it. I have known several to die with the secret locked up in their breasts.

"In this case I found a discharge from the os with a slight odor. I swabbed out the vagina, applied a tampon of aseptic gauze, put a pad over this and held it in place with a T bandage. She will probably want me early in the morning, although I have known a case to go a whole week after the old doctor had operated on it. He gets from two to fifty dollars for each case. This is a good girl. I have known her for about twenty years. If she gets out of this trouble without it becoming known in the neighborhood she may be a good woman from now on."

The telephone rang: "A call to go thirteen miles in the country to operate on a case of obstruction of the bowels, the message says."

The doctor procured a hatchet, a cold chisel, and an old satchel and put them in the buggy. "What is that for?" I said. "We have a long drive to make and I will explain as we go," said the doctor. A good deal of the way was through long lanes with corn fields and wheat fields alternating on each side of the road. This was early in June and the wheat was almost ready to head and the corn was just beginning to show the long rows across the fields. When we had well started the doctor said: "Well, now in reference to the hatchet and chisel. I am invited to deliver an address to the high school students next week. I am allowed to select my own subject. I am going to give them a talk on the subject of mosses and lichens. I am going to cut some chips with the bark on from the different saplings which we find along the streams which we pass on our way. We will pass a sand stone quarry on our return, and I will break off some pieces from the rocks which have been exposed to the sun and rain for the last several centuries. These chips and stones contain a great variety of lichens. I think I will be able to make the subject interesting to the students. We can examine these growths with a magnifying lens. I can call their attention to the great variety of vegetable life which is thus spread before our eyes every day; explain the growth and uses, call attention to the fact that there is great diversity of growth and uses of the apparently insignificant. You know there are several thousand different varieties of mosses and lichens, and the uses are various. Lectures of this kind give the student a taste for nature studies, and call their attention to little things which

they have but to open their eyes to observe. I find high school pupils take an interest in such things, and are eager to learn more and more. Last winter I gave a talk on the repair of blood vessels, caused by a suggestion from one of the pupils of the physiology class as to what became of the blood vessels when a limb was amputated. The discussion of this subject led to a thorough discussion of growth and repair in general, and did not end until the pupils had entered upon a thorough discussion of the subject of development."

We reached the home of the patient about noon. There were three doctors in attendance. Two were recent graduates, one of whom was in charge of the patient from the first. The third was a middle-aged practitioner. I shall refer to the three doctors in charge of the patient as the faculty and my friend as the general practitioner. The following history of the case was obtained. This was on Saturday morning. The man had been sick since one week ago this afternoon. The older member of the faculty seemed to act as spokesman, and seemed to have dictated the treatment since coming into the case so far as I could ascertain. The patient was about twenty-five years of age and according to the history as detailed to the general practitioner returned from town Saturday afternoon. His wife had baked some light bread and the man being quite hungry ate a whole loaf; soon after which he took a severe pain in the lower part of the abdomen on the right side; this was accompanied by diarrhea and vomiting. One of the younger members of the faculty was called and gave a dose of calomel. This gave but little relief; the diarrhea stopped but the pain and vomiting continued. The other younger member of the faculty was called, calomel and bismuth was given with the same results. On Monday morning the older member of the faculty was called.

They then began to give more active cathartic treatment. Calomel, castor oil and finally two drops of croton oil were given. Pain, vomiting and constipation continued and the temperature hung around in the neighborhood of 104°. On Friday afternoon they concluded an operation was necessary and the general practitioner was called Saturday morning. The older member of the faculty said he had noticed a swelling in the right inguinal region. He called attention to the fact that the swelling was about the size and shape of a loaf of bread. He gave it as his opinion that the loaf of bread had become impacted about the neighborhood of the ileocecal valve. The general practitioner wanted to know if the patient swallowed the loaf of bread whole. We now retired to the shade of a large elm tree near the house to discuss the case. After the treatment had been gone over and an estimate made that the patient had taken about one hundred and sixty grains of calomel, a quart of castor oil and two drops of croton oil, all of which seemed to have been vomited, the general practitioner remarked: "The Lord has certainly been good to you, gentlemen. This man's constant vomiting has certainly kept you from killing him." "Well," said the older member of the faculty, "I

have always noticed that the patient gets better as soon as the bowels move." "No," said the general practitioner, "you have always observed that when the patient gets better the bowels move. You might as well try to butt down this elm tree with you head as to move the bowels by the course of treatment you have pursued in this case. This is a case of appendicitis. The first thing nature does in a case of this kind is to build a wall around the seat of the trouble. This is done by the throwing out of inflammatory material which glues the tissues together. This constitutes the tumor we find in this case and in every case of appendicitis. The formation of this tumor involves the appendix and all the contiguous structures.

"The bowels do not move, because peristalsis is prevented by the glueing together of everything in the neighborhood. An effort to move the bowels by giving cathartics interferes with the building of this wall and if the wall is already built has a tendency to break it down and allow the inflammation to extend. There is always a tendency for an inflammation to extend throughout the entire limit of the structure in which it begins unless nature interposes some obstacle. There would be a disposition for an inflammation beginning in the appendix to extend throughout the whole peritoneum if it were not for the adhesions taking place, limiting the inflammation. Now son," this to the young man who first had charge of the case; "you go in the house and give the patient a half grain of morphine, by hypodermic, and when you come back we will continue the discussion." "All right," said the young doctor. "I am awfully glad to give something to relieve his pain; but I want to hear all the general practitioner has to say, so wait."

When the young member of the faculty had returned, the general practitioner continued: "In this case the adhesive inflammation limits the trouble to that neighborhood. I would not operate on this case at the present time, because we are not sure that the inflammatory process has stopped. The giving of the cathartics may have done some harm, and the vomiting may have not allowed the adhesions to form properly. If this case had been operated upon within the first twenty-four hours and everything removed and the neighborhood thoroughly cleaned out the patient would have been almost well by this time. Another thing, if the adhesive inflammation *has* limited the process, an operation might re-light the inflammation in the peritoneum and there is no telling where it would end. The patient would probably die in a few days. Now as to the treatment in this case; we will begin as if we had been called to the case to-day and found the patient in his present condition. It may be that the patient has suffered no harm from the present treatment. The first thing to do in this case is to give the patient rest, relieve pain. This is to be done by hypodermics of morphine. In addition to hypodermics apply hot fomentations to the abdomen, especially on the right side, but it is well to allow them to extend over the whole of the abdomen.

"I usually use flax seed meal poultices as hot as can be borne. Have one ready to apply as soon as the first is removed, never allowing the abdomen to come in contact with the cold air. In addition I would use hot enemas. I would begin by the introduction of a small quantity. This should be retained as long as possible. You are to remember that you are not using the enemas to move the bowels, in fact you do not desire to move the bowels. You are to remember that the bowels will move of their own accord as soon as the inflammation has sufficiently subsided to release the adhesions which held the tissues together forming the wall around the appendix. The reason you use the enemas is that you desire the hot water to come in contact with the seat of inflammation to act as a fomentation. These enemas should be repeated as often as every two to four hours, and when you find that they cause irritation they should be discontinued for a while. Now as to medicine outside of an occasional hypodermic of morphine, I am in the habit of prescribing something like this:

"℞ Hyd. Chlor. Mit.
Opii pulv. Squibb.
Ipecac pulv. āā gr. i. Mices.
Ft. Chart No. xx.

"Sig. One every one or two hours, dropped dry on the tongue and wash down with a teaspoonful of hot water.

"There is nothing better to relieve inflammation of the peritoneum than the pulverized opium, and I am old fashioned enough to believe there is something in the antiphlogistic effect of calomel. I would not allow anything to enter the stomach in the way of food or drink. The enemas will be sufficient to relieve thirst. The patient will not need nourishment. By refraining from taking food nausea and vomiting will be avoided.

"When the pain is entirely relieved, and the temperature gets down to normal and stays down for several days, it may be the proper thing to open an abscess. It may be that this case will give me an opportunity to illustrate my method of opening appendicular abscesses."

We stayed until after lunch. When we left the patient was feeling fine, had been sleeping, was in a gentle perspiration, the temperature had gone down to 101°, pain and vomiting had ceased.

I received a letter from the general practitioner two years after this event in which he said that the patient recovered without an abscess and no second attack had occurred.

We gathered our rocks and chips on our way home and reached town in time for dinner. After dinner we attended a wedding anniversary party at the parsonage. A china dinner set was presented to the preacher and wife and the doctor was master of ceremonies.

At a very early hour the next morning the doctor received a telephone message requesting his immediate attendance on the young lady whose acquaintance I had made at his office yesterday morning. The

young woman had a chill and was very sick. I accompanied the doctor, the drive was about eight miles. We were ushered into the room by the mother. The doctor said he would want some boiling water. While the mother was gone to prepare it the young woman informed us that she had not informed her mother as to the nature of the trouble. That she feared that her mother would inform the father and he was of an ungovernable temper and a stormy time would be sure to follow and the trouble would become known in the neighborhood, that she had sisters who would suffer from the disgrace; and that she preferred that her mother be not informed or if it was necessary the doctor inform her himself. The doctor promised to do the best he could in relation to the matter. When the mother returned with the hot water: "What is the matter with her doctor?" she inquired. "Well," said the doctor, "she has missed her monthlies about three months, there has been quite an accumulation in the womb; decomposition has begun and the womb will have to be emptied out, or it may result seriously." "Is it a dangerous operation?" said the mother." "Not very dangerous, but very painful," said the doctor. The patient was placed across the bed, the mother at the patient's head. The doctor sterilized a spiral curette, a pedicle forceps, a long jawed fenestrum forceps; a tenaculum forceps, and a Goodell's dilator, and a gauze packer and a speculum. He then called for a half dozen newspapers; several of these were placed on the bed under the patient's hips, several were placed on the carpet between the doctor and patient. The chamber was placed under the patient's hip and a long towel over her legs. I always use an ordinary chamber in a case of this kind, it is just as good and convenient in every way and everybody has one in the house. It obviates the necessity of the doctor carrying so many things with him. The bandage, pad and tampon which the doctor applied at his office yesterday morning was removed; the parts washed with soap and hot water, and a vaginal douche used. The doctor now introduced the speculum and the work begun. Fortunately there was sufficient dilatation to introduce the pedicle forceps. The fetus was brought down, seized by the fenestrum forceps and delivered in a few minutes. The patient had been warned that the pain would be almost killing, but that she must bear it and not make sufficient noise to arouse the neighborhood. The doctor now took the medium sized spiral curette in his hand. "The worst pain is to come," said the doctor. "O, lordy," was all the response from the patient.

The spiral curette was introduced and the placenta soon removed.

The curette was introduced several times until no debris came away. The doctor now attached the tenaculum forceps, gave it to me to steady the uterus until he filled it well with aseptic gauze. He now washed the vagina with sterilized water; the external genitals with soap and hot water; now removed the gauze from the uterus, used the second vaginal douche, and repacked the uterus with gauze. "Now I will let this packing

remain from twenty-four to forty-eight hours. I will then remove it and discharge the patient with directions to remain in bed a week."

"Now," to the mother, "you had better say to the neighbors, that the doctor says she has the grip. People will talk and some one might be unkind enough to mistake the character of the trouble if it were known that any kind of an operation were performed. I will come sometime to-morrow or next day and remove the tampon from the womb, use another vaginal douche and she will have nothing to do but get well."

While the mother had gone after some water to wash our hands and instruments, the doctor wrapped the fetus neatly in a newspaper, tied a string around it and placed it beside one of his grips on the floor.

We cleaned our hands and instruments. I took one grip, the doctor the other and the newspaper bundle. When we got to the buggy I noticed he carried nothing but the grip. "What did you do with the paper bundle?" I asked. "Stepped in the privy and dropped it into the vault," he said.

"I do not know whether the old lady suspicions the nature of the trouble or not. If she does I hope she will be discreet enough to say nothing. When a family finds out that you know about the skeleton in their closet your relations are never so cordial again. I have lost the patronage of several families which would have been very valuable to me, because I accidentally came in possession of secrets in such a way that they knew I knew. To illustrate: A single lady about twenty-three years old came to me to get a hair pin removed from her bladder. I found out that she had been in the habit of titillating the clitoris and that through some hook or crook it slipped into the bladder. I was fortunate enough to dilate the urethra and catch it with a pair of forceps and remove it after she had taken up almost a half day of my time in the office. I told her the charge would be twenty-five dollars, and that she could pay me when she could, a little at a time. She was a dressmaker and did not make much money. She seemed very grateful and well pleased with the arrangement. She married a wealthy farmer, a widower, before she had paid anything on the bill. I waited more than a year and she never came to see me. In the meantime she had a baby and another doctor was called to wait on her. I met her on the road one day and suggested that I ought to have something on my bill. She promised that she would try and manage so as to get some money that she would not have to account for to her husband and would pay me. Another year passed, another baby came and another doctor officiated. I met her when this second baby was about a year old at a neighbor's who had a sick wife. I had a good opportunity to talk with her as she rode in the buggy with me to her home. She told me on this occasion that she could never pay me. She told me that her husband furnished her with plenty of money, but that each accounted to the other for all the money each spent. 'If I paid you that much money,' she said, 'I would have to account for it. I could not have the courage to tell him what the bill

is for. You can better afford to lose it than I can to pay it under the circumstances. You want to know why I do not send for you in case of sickness. I do not want to see you because I am humiliated by the knowledge that you know the follies in which I indulged before I was married. I suppose that if I thought I was about to die and no one else could save me I might send for you. Am I afraid you will tell my husband about it? No. If you did I would deny owing you anything, and would swear, if necessary, that you never did anything for me. You have no way of proving the bill. You made the mistake of not requiring me to bring some one with me when I came to your office. I have lain awake many nights thinking over the matter and wishing I could find some way to pay you something. I do not think there is any way for you to get anything. So the matter had as well be dismissed.' "

This was Sunday morning. The doctor said: "We will not get to town in time for church, but if you want to hear some elegant music you can do so. Have you noticed that brown thrush which keeps flying from hedge to hedge ahead of us? and do you see that lone plum tree a quarter of a mile ahead?" I answered in the affirmative. "Well that thrush is the singer and that lone plum tree is the concert room. The thrush will keep ahead of us until it reaches a point a hundred yards beyond the plum tree. We will drive up to a point opposite the tree on the other side of the road. We will wait a few minutes and the bird will return to the tree and begin its song. Its mate has a nest at a point about one hundred yards beyond the tree. I have been watching this pair of birds for several years. About this time every year they build a nest and go through the same program every day for three weeks, until the eggs hatch. If I stop anywhere near this tree any time before noon and remain for half an hour the bird will come and sing its song from the tree. I do not know whether it sings at regular intervals all the day long, or whether it sings because I am listening, or whether it sings to entertain its mate, or whether it sings because it cannot choose but sing."

I saw a red-breast upon the wall,
And then I heard the truant's call
And cast a storm of earth and stone.
It flew and perched it far and lone
Above a rushing cataract,
Where never living thing had tracked,
Where mate, or man, or living thing
Could ever heed or hear it sing;
And there it sang its song of spring
As if a world were listening.
It sang because it could but sing,
Sweet bird, for it was born to sing.

THE CREDULITY OF THE LAY MIND, AN ASSET OF THE FAKE DOCTOR AND CERTAIN PROPRIETARY CONCERNS.*

By H. E. Kirkpatrick, M. D., of Dalton, Mo.

The mysticism of the ages has come down to the present progressive age. How many, while laughing to scorn the idea, have an uncanny feeling if they leave the house and forget something for which they must return! How many intelligent and educated people plant their crops at certain seasons of the moon, and how many ladies, who lend assistance to the maintenance of families by making their own soap, think that soap can be made successfully only in the light of the moon!

But chiefly in the treatment of physical ills do we find in the lay mind a crude cropping out of the ancient ideas which are little in advance of the charms and incantations of that time. This can not be laid up to the condition of the sick man's mind. Most of this crops out in the other members of the family and in the solicitations of officious but well-meaning neighbors who each have a remedy for every disease which, to them, is the same as was cured in their own or neighbor's family. Thus, in many cases, the patient is over-doctored before the physician sees him. In this connection, let us hope he is not over-doctored afterward.

This officious meddling is seen in its most nauseating form in educated people, who, from their position or profession, wield a great influence upon those who look up to them. To the physician many of their suggestions are just as crude and possibly less rational than those offered by the old negro aunty in the cabin. Many preachers, many lawyers, many men and women of rank and distinction are guilty of this. We see their names in print extolling the virtues of this, that, or the other nostrum which they have used in their families. True, a great deal of this can be traced to the man who makes a business of obtaining recommendations; some, to bribery; and a great deal is given in good faith, and in ignorance of the properties of what is recommended.

Ignorance of physical laws and disease, and of rational therapeutic measures, added to an inherent cropping out in our natures of the ancient mysticisms, seems to be the crux of the trouble. The credulity of the public mind in these matters is amazing and widespread. Men of good business judgment and sound common sense in most matters, betray a strange lack of common sense in matters medical. For example, the child, sick with whooping cough, is served stewed crow, as

*Read before the Chariton County Medical Society, December 10, 1908.

though poor humanity did not have to "eat crow" soon enough without being forced to it in infancy, and that, too, when sick and in no condition to resist. Sheep-pill tea is conscientiously given to bring out the measles, and cobwebs and soot stuffed into a fresh, bleeding wound, already washed as surgically clean as possible by the flow, which a little pressure with a clean pad of cloth would stop nicely and put on the road to recovery, or keep in good condition until the doctor is seen. You can add to these examples in your own minds. People must do something, and are surprised when the doctor abstains from putting a germ-containing ointment on a clean wound.

So much for the credulity of people. Let us examine into the credulity of a number of the medical profession. Shall we call it credulity? I believe it to be such in many cases. Shall we call it ignorance of therapeutics and disinclination to apply themselves to a study of the action of drugs and to a study of the pathological states on which alone can be based rational measures? This may be true in some cases. How easy to write the name of a ready-made mixture, for example, one which is extolled and flaunted before our eyes as being "the most efficient agent yet discovered for all dropsical conditions from whatever cause." How securely the physician can rest at night! He does not know the ingredients of the medicine he has administered, therefore he does not have to conjure up in his mind any injurious effects which it may have, neither is it necessary to study the pathological cause of that dropsy, but he can rest secure in the fact that it will disappear, as if by magic, because somebody who has something to sell says so.

This barefaced advertising to the profession is a slap in the face and an insult to the physician's intelligence. The presumption of these commercial manufacturers is galling and it is a direct affront to any man who considers himself a doctor.

Let us see how the credulity of people may be used to advantage by the ethical physician. We know that the first requisite to the treatment of disease is rest, physical and mental. The faith in medicines and doctors causes the patient to call his favorite doctor, who, to hear him express it, can almost raise the dead, or whose efforts, if unavailing, would render it useless to call any one else. This helps secure mental rest. The patient may need only mental and physical rest, and, yet, if given a little medicine, even without the expectation of a decided physical effect, he has tangible evidence that something is being done for him, and, under proper dietary measures, proceeds to recovery.

This brings me to the point of why the numerous schools and "isms" have their cures and incidentally succeed financially by a judicious use of this credulity of the public mind. I believe it to be a fact that a large majority of the osteopaths' cases and almost all their cures are functional neuroses, the treatment of which is not medicine, but suggestion. Men and women, after trying doctors and medicines, go to the osteopath with a ready-made diagnosis. They leave their surroundings and

business cares to go to the institution, a very important factor in treating neurotic conditions. Next, a neat pretense of a careful examination is made. The clothing is stripped from the back and the fingers run down the spine, locating the tender spots typical of many of these conditions. "Ah!" says the doctor, "You have a spinal lesion. If your doctor had examined your spine, he would have found the cause of your trouble. The spinal nerves, as they pass between the vertebræ are impinged upon, throwing the human economy out of balance."

This learned disquisition usually has the desired effect and a few months' treatment is agreed upon. Then, with all conditions favorable to a cure, confidence established, change of scene, relexation from business, a highly suggestive method of treatment, he proceeds to recovery, and, after a time, comes home snapping his fingers at the M. D. thinking he has found a panacea for all the ills of humanity. Sufferers from organic disease are treated for a while and come home uncured and loath to mention their failure. Thus the many failures are not heard of.

Weltmer, of magnetic healing fame, no doubt made similar cures even by his absent treatment. The Christian scientists have their cures but their "science" does not teach them why. Carson and others of his ilk possibly cure people by force of mind, but certainly not through any physical effects produced by the "medicated" papers he pins to his patients' shirts. The cure, however, is of secondary importance.

Granting that a majority of Still's followers act in good faith, they, nevertheless, claim everything for their method which is based upon a false idea of pathology; and, in their ignorance, they decry therapeutic measures absolutely proven. Located as they are, away from the large centers of population, what opportunities have the originators of these schools to make a practical study of pathology, which is the basis of rational therapy? Their spinal lesion is a myth as subtle as any of the ancient charms, but it works well in functional nerve troubles.

Fellow physicians, we can learn a few lessons from these fellows. A careful separation of the functional neuroses and the application of psychotherapy to the greatest extent admitted by our individual personality will prevent many of our patients from falling into other hands to our chagrin. These troubles are real, though mental, and should not be turned away as lacking consideration.

A decided war has been waged upon various advertising concerns by Mr. Bok, Samuel Hopkins Adams and others, exploiting the fallacies of their specious claims, but we still find people who think that Dr. Hartman has explained their symptoms by saying that everything is catarrh of this or that organ, and peruna is still a very popular medicine. Swamp root advertising has sent many a patient to me with the request to give them something for their kidneys. Inquiry usually revealed the fact that, prompted by this nefarious advertising, they had "examined their own urine" by setting it aside in a warm place for 24 hours when,

noticing a deposit of the alkaline phosphates of a perfectly normal urine, they are led to believe their kidneys are affected.

A few instances to show the methods of the advertising specialist who guarantees his cures may be pardoned in this paper.

After transacting a business in the East, a resident of this county on his return stopped at Columbus, O., suffering from what he supposed was an asthmatic attack. A cab driver approached him and said: "Mister, you need a doctor." This was evident and he was directed to a doctor about two blocks away, who sprayed his throat and lungs with a nebulizer and relieved his breathing. A minute examination of his lungs revealed the fact, so-called, that he had incipient consumption, but that the doctor could cure him and would guarantee to do so for $100. The gentleman had felt that his health had failed for some time and was impressed by the relief he had obtained, but told the doctor he could not spare so much money at that time. Upon this the doctor agreed to accept $10 down and $75 more when the cure was complete, which was to be within three months. This was a successful and shrewd business man, but when he left that doctor's office, he had contracted on a printed blank to take the medicines, which were to be sent by express C. O. D., faithfully as directed and correspond once a week to let the doctor know the progress of the case, the latter guaranteeing to refund the money if no cure was made. At the same time he had given his note for $75.

He had written complaining that he was not improving, in fact, was getting worse, and wanted his note returned, but the reply was that the doctor was willing to stand to his agreement and expected the patient to fulfill his.

I was called to see him. Stiffened arteries, irregular heart action, increased pulse tension, and urinary findings led me to diagnose his case chronic interstitial nephritis. His lung trouble was an accompanying bronchitis. He told me his story as he was anxious to fulfill his contract and get his note returned. Thinking over the matter, I advised him to stop the treatment and go to the bank and see if his note was there for collection. He found it awaiting him; and, as the expense of bringing suit on his contract in a distant state rendered it out of the question, he paid it.

Another instance. A lady with gall stones, diagnosed by several prominent physicians, received a letter from a gall stone specialist of Excelsior Springs saying her name had been handed him by her friend Mrs. ————. He said: "If you have gall stones, I can get them without resort to the knife by means of medical treatment which will dissolve them. Send $5 for the medicine and $20 or $30 more later on as you think you are benefited.

This lady showed me the letter and asked me if I did not think the proposition fair enough. I asked her if the doctor knew if she had gall stones or not. She acknowledged he did not. "Yet," I replied, "he

is willing to treat you for such without seeing you and, as far as he is concerned, it is immaterial; for, if he can persuade enough people to send him $5 for a few boxes of pills, he is ahead; and, in some cases, too, he may receive the $20 or $30. She thought over the matter and next day told me she declined the proposition. This fellow was rather more modest than the average fake.

It is galling to see people the dupes of these charlatans; yet I do not think this or the habit of stomach drugging by patent medicines lessens, to the extent of a nickle, the income of the faithful home doctor who braves the weather to take care of his people.

Then, why wage war? Simply this: It is an evil. The people suffer the loss of money, the blasting of hopes, and, what is of more importance, the loss of time, which in many cases is invaluable.

The profession has always stood for humanitarianism, and to-day the rank and file are seeking by every means to lessen the necessity for their services at the bedside. Quarantine measures are executed indirectly by the police powers of the State, but directly by the State boards of health and the physicians themselves.

Malaria is being eleminated through a knowledge of its source. The specter of yellow fever no longer haunts the semi-tropics. Cholera is almost a thing of the past, and tuberculosis, that scourge of humanity, bids fair to cease from troubling the human race.

To further this cause, the physician is unselfishly seeking to educate people above mysticism and superstition. Great strides have been made in recent years in the enactment of laws protecting the people from charlatans, patent medicine vendors, and incompetents. There yet remain measures to protect people from themselves. They eat too much and too hurriedly, and at irregular hours. They sleep in ill ventilated homes afraid to breathe the outside air for fear of "taking cold." This civilized age has almost turned night into day, and the ceaseless grind promises to sap our country of its nerve energy. When sick, many "doctor" too much. I sometimes think one of our functions is to keep people from taking too much medicine. With these great problems before us, let us physicians, if we have fallen victims of the wily manufacturer, who presumes to tell us how to treat our sick, hark back to first principles. Let us study the pathological condition present and treat the sick man, not the disease, according to his needs. Let us endorse the work of the Council on Pharmacy of the American Medical Association, which has been an eye opener for the profession, and that of the Ladies' Home Journal, Collier's, and other publications, which has been the same to the public.

In conclusion, I wish to say to the medical profession and to the laity, do not be imposed upon. A healthy skepticism is a desideratum.

BURN.*

By T. J. Reiley, M. D., West Plains, Mo.

I wish to report a case of severe burn, and the treatment followed, believing that it will be of interest, especially to the general practitioner, as I finally met the indications better than in any previous case, although this was the most severe burn that it has ever been my lot to see, and the patient recovered.

I was called February 12th of last year, to see little Miss L., five years of age, who resided 12 miles in the country in a log house with only fair surroundings. She had been burned several days prior to my visit, the clothing having been mostly burned from her body. I found her swathed in cloths saturated in lard oil as a dressing. When the dressings were removed I found that the burned surface extended from below both knees to the upper border of the scapulæ; all of the surface of each thigh and hip, on the right side extending to the abdomen; the waist line was charred and above this the entire back was burned, but not so severely. She was suffering intense pain and the parents had been trying to keep her quiet by the use of tincture of opium. Her temperature was 103°, pulse 150, respiration very rapid, tongue dry and coated, bowels distended, tympanitic and tender.

I cleansed the surface as well as possible with a warm alkaline solution, using as a dressing linseed oil and lime water, administered calomel, followed by oil and terpin, continuing the terpin, three grains every four hours for 48 hours, and twice daily gave rectal enemas of normal salt solution.

The next day she appeared some better, but the improvement was only temporary; she still suffered severe pain, and had to be kept under the influence of opiates. I continued this treatment for three days, when, upon removing the dressing, the charred tissue separated and came away with it, except on each hip where the burn was so deep that when the tissues did separate a few days later, the great trochanter of each side was exposed.

At this time her condition was much the same as when I first saw her, except the pyemic condition which was worse, her body being covered with small abscesses the size of a hazelnut. I opened 27 at one time. I decided that I would try a picric acid dressing, but the watery solution was so painful that I anointed the entire surface with linseed oil; relief was almost instantaneous. I then decided to use an oily solution which I had made by cutting the picric acid with alcohol and adding

*Read by title in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

the oil; after the application of this dressing she soon sank into a peaceful sleep and from this time I had to give no more opiates. The intestinal trouble gradually subsided and the temperature dropped to 99 or 100 in the course of a week; the pulse still remained at about 150 and continued so for several months.

I left these dressings in place for two days, the nurse dressing one side of the body each day, except when we were unable to prevent the dressing being soiled by the calls of nature, at which times they were removed. When the gauze was removed it left the ulcers healthy and perfectly clean, ready for a fresh dressing; there was no separation after beginning the use of the picric acid dressing.

The burns on the back healed in the course of six weeks, and the lower part of the thighs was fairly covered by the middle of May, three months after being burned. By the middle of June the hips were filled out sufficient to try skin grafting, which I did after the method of Reverdin (each hip at this time presented an irregular triangular, ulcerated surface about 6x9x11 inches), and notwithstanding the objections to this method, especially when the surface to be covered is in the region of a joint, it was the best that I could do on account of the great surface to be covered, and the father of the child was the only one to furnish the grafts. I planted about twenty grafts on each hip, the most of which grew and in two months the small islands had nearly covered the ulcers. The grafts were protected by the use of oil silk for three days, then the picric acid dressing was resumed.

In July she was able to stand and walk by using a support and by the first of August she was walking unattended, and now walks and runs as well as she ever did. The cicatrices are fairly smooth and soft and remained fairly sound, only breaking down in two places but these filled and healed rapidly. I have since used the oily solution of picric acid as a dressing for large ulcerated surfaces and have always been pleased with the result.

MIDWIFERY IN ITS RELATION TO ABORTION AND THE LAWS OF THE STATE OF MISSOURI.*

By Wm. B. Winn, M. D., of St. Louis, Mo.

The term "abortion" is used by medical men to signify the emptying of the uterus of the products of conception from any cause whatsoever before the viability of the fetus.

The use of the adjective "criminal," restricts its meaning to any interference with the course of pregnancy, whether the uterus be emptied or not with intent to destroy the product of conception. Therefore, according to the causes of abortion, we classify them as: (1) Spontaneous. (2) Induced (a) legally, (b) criminally.

The law deals only with cases of induced abortion for criminal purposes, and it is only from this standpoint my remarks upon midwifery in this city in connection with abortion must be taken.

Without any outside interference whatsoever it is probable that about one-eighth of all conceptions fail to go to full term, so that when we add to this the constantly increasing loss from induced causes, whether legal or criminal, it is readily seen what an enormous annual destruction of life is chargeable to this cause. This means loss of potential wealth, and the state is at once doubly interested in the subject from a moral and financial standpoint.

The remarkable frequency of abortion, despite constantly increasing penalties of law, is due not alone to disordered sociological conditions, but to: (1) The increased ease, facility and even comparative safety with which it may be carried out through modern antiseptic procedures, by the merest tyro in the art.

(2) To failure of the State law to place midwives and schools of midwifery under proper supervision.

(3) The shameless publication, despite every appeal for decency, of advertisements giving information as to abortifacients or the addresses of those openly engaged in the practice of abortion.

So long as man and woman are mortal, so long as passion, pleasure and pain control the human impulse, just so long will this evil traffic exist. We can never hope to stamp it out completely, but even with the loss of fear of post-abortive complications, through discoveries of modern science, control of the remaining factors will drive the disreputable business to such straits of existence that it can be carried on only by secret information and at such constantly increasing price as the greater hazard will demand.

*Read before the St. Louis Medical Society, November 24, 1908.

As late as two years ago the daily papers teemed with the advertisements of these parasites,—vampires upon the misfortunes or selfish instincts of misguided men and women; some open, others thinly veiled, to add to the charm of secrecy, but all disgusting to the moral appetite of the virtuous, right minded citizen.

Firmly confident that the business of these people could not be made profitable except through such publicity, I at once set about, under instructions of the health commissioner, to suppress or totally curtail their right to insult decency and the law by an appeal to the postmaster general and to the civic pride of such papers as carried these advertisements. Already golden fruit is being borne of the effort, as evidenced by the strenuous fight these violators of law and decency have made to retain their heretofore unrestrained liberty. Gradually the lines have been drawn tighter and tighter, so that to-day few remain to shock the eye of decency.

To succeed, however, I was forced to conduct a long series of investigations proving the criminality of these people and to present it to the Government for its consideration. The ruling of the Postmaster General relative to the mailing rights of newspapers carrying advertisements as to where abortifacients or criminal operations could be had, was the result of these inquiries.

On the 15th day of November, 1907, this order of the Postmaster General, supporting my position, was severally served upon every newspaper in the city, since which time I have had only to secure evidence of criminality to suppress the advertisement of others than those originally named in the order of the Postmaster General without the necessity of carrying the matter to his final adjudication on the individual merits of each case.

The denial of the right of publicity to such advertisements has then done much to suppress the illegitimate business and the Postmaster General and daily press deserve our thanks.

However, the real evil lies in the power of the State to remedy, and it is to this end I call your attention to the facts and ask your support in the passage of proper laws regulating midwifery in this State.

The licensing of midwives under present regulations is simply to legitimize abortion. Indeed, to my notion, the unrestrained liberty of one woman to attend another in confinement is simply a relic of barbarism, against which the better judgment of man has not yet been able to contend through silly sentiment, though it has cost us thousands of lives which might otherwise have brightened our homes at the fireside and enriched the State in public usefulness.

I make this statement advisedly, knowing that I will be criticised, but any man occupying my position for two years and who has carefully studied the facts as presented to him will condemn the further licensing of midwifery in this State, except as a distinct branch of medicine and surgery under the most rigid rules of efficiency and proper supervision.

My original investigations, intended only to rout the "advertising abortionists," brought me eventually into closer contact with the whole business of midwifery in the city, and I am free to confess that I know of no businness, trade or profession involving so much risk to life, about which fewer restrictions of law have been placed.

As the law stands upon our statutes, there are no requirements of preliminary training, no restrictions as to moral standing and absolutely no supervision by the State Board of Health over schools purporting to issue diplomas of efficiency in this important branch of medicine.

All the laws of this State touching upon the status of the midwife may be found in the Sessions Acts of 1874, 1877, 1883 and 1901.

In the Sessions Acts of 1874, page 111, there was passed an act entitled, "An act to regulate the practice of Medicine and Surgery in the State of Missouri," in which it was provided that *thereafter* it should "be unlawful for any person to practice medicine or surgery in this State" without having received the degree of Doctor of Medicine from some medical college or university. There then follow certain provisions for the licensing and registration of all persons desiring to practice medicine and surgery in Missouri. In this act, however, it is expressly stipulated (Section 6) that "This act shall not be so construed as to prohibit any woman from practicing midwifery and securing pay therefor without such registration or diploma."

In the Session Acts of 1877, entitled "An act to regulate the practice of Medicine and Surgery in the State of Missouri," substantially the same requirements are set out as in the act of 1874, and here again (Section 5) is appended the express stipulation that any woman shall not be restrained from the right to practice midwifery and receive pay therefor without the necessity of registration or filing any diploma.

Section 9 repealed the entire act of 1874. This remained the law until 1883 when there was passed "an act to regulate the practice of medicine and surgery in the State of Missouri."

Section 1 of the act, regulating the practice of medicine and surgery, provided that every person practicing medicine and surgery in any of their departments, should be a graduate of some legally chartered medical institution, or in lieu thereof pass a satisfactory examination before the State Board of Health, created for the first time at the same session by an act specifically defining its powers and duties.

All previous acts or parts of acts inconsistent with the Act of 1883 were repealed and absolutely no mention of midwifery was made, except in so far as it may have been construed to be a department of medicine and surgery.

Acting on the assumption that it was and that all women then practicing midwifery were properly equipped mentally and morally to assume the obligations and responsibilities of an obstetrician, the State Board of Health at once commenced the issuing of licenses to these

people which were then in turn properly recorded in this department, and licensed midwifery for the first time became a fact.

It was not until the year 1901, however, that the term "midwifery" was expressely used in the medical practice acts of this state. In the Sessions Acts of that year was enacted "An Act to Regulate the Practice of Medicine, Surgery and Midwifery, and to prohibit treating the sick and afflicted without a license, and to provide penalties for the violation thereof."

Section 10 of this act deals exclusively with midwifery and is as follows:

> "It shall be unlawful for any person to practice midwifery in this State before receiving a license to do so. Every person desiring to practice midwifery as a profession shall make application to the State Board of Health for examination and pay a fee of five dollars. And upon passing an examination satisfactory to the said Board upon the subject of obstetrics shall receive a license to practice as above provided. * * * * And any person practicing midwifery as a profession * * * * without first obtaining the license aforesaid * * * * shall be deemed guilty of a misdemeanor, etc. Nothing in this section shall be so construed as to require women practicing midwifery to obtain a license when said women do not practice midwifery as a profession and do not make any charges for their services."

It will be noted in passing that while this act placed requirements for preliminary training, moral standing, etc., upon applicants for license to practice medicine and surgery, absolutely on provision was made for either in determining the qualifications of any woman desiring to practice midwifery.

Section II repeals the act of 1883 under which licenses had been arbitrarily issued to midwives by the State Board of Health, leaving the whole subject in a state of chaos and uncertainty as to the standing of these licentiates. Up to this time there were several theories as to the status of the midwife, none of which, however, has ever been put to the test of final decision in the courts of this State. One was that the law of 1883 regulating the practice of medicine and surgery "in *any* of their departments" had the effect of abolishing the practice of midwifery altogether.

A second theory was that the law of 1883 impliedly gave the State Board of Health the power to license midwives because midwifery is admittedly a department of medicine and surgery.

The third contention was that midwifery being a distinct science was not embraced in the term "medicine and surgery in any of their departments," as used in the act of 1883, and that, therefore, the status of midwives under the provisions of the Act of 1874 was not in any way disturbed.

Assuming that the action of the State Board of Health was legal and that they had authority to issue such licenses under the act of 1883 because midwifery is an acknowledged department of medicine and surgery, it still leaves in doubt as to whether or not under the act of 1901, which repealed all previous law on the subject, midwives so licensed should not be required to re-register by examination if they desired to continue in the practice of midwifery.

However, whatever construction is given the effect of the law of 1901 on the status of midwives, the law itself governing the issuance of new licenses is far from satisfactory. Aside from failure to incorporate evidence of good moral character and preliminary training under some reputable school of midwifery as in the case of physicians desiring to practice medicine and surgery, thereby giving the State Board of Health supervision over the school itself as well as the candidate for admission to practice midwifery, the law is still unsatisfactory in that it does not provide a penalty for holding out or advertising as a midwife, when in fact they have no authority as such or have even been denied the right to engage in such practice by the State Board of Health under the medical practice act (Sessions Act 1907, Section 5, Approved March 22, 1907).

Any person not properly licensed, holding himself out or advertising as a physician, does so in violation of the law and can be punished accordingly. Not so, however, in the case of midwifery. Here the actual practice of midwifery must be proved and in addition thereto that compensation was received.

The requirement that applicants to practice medicine and surgery in this state must produce evidence of good moral standing, be graduates of accredited high schools or colleges, and also have received a diploma from a reputable medical college of a full four years course, thus giving the State Board of Health supervision over the school itself, has done much to raise the standard not only of education and fitness, but of moral excellence among physicians, while whosoever will, may conduct a school of midwifery in whatever manner they may desire and turn out graduates regardless of either moral or mental equipment.

Among the States which have recently enacted new medical practice acts or amended old ones may be mentioned Oklahoma, Michigan, Illinois, Vermont and Wisconsin.

The Oklahoma Sessions Act of 1907-8 entitled "An Act Regulating the Practice of Medicine and Surgery," is a very extensive one, particularly defining the duties and powers of the State Board of Examiners, preliminary requirements of applicants for physicians' licenses, the meaning of unprofessional conduct for which such licenses may be revoked, etc.

The midwife, however, is entirely slighted with the following exception—"provided that nothing herein contained shall be construed as to prevent midwives from practicing in cases of emergency." The same questions would arise here as in this State, previously to the law of 1901. Did the legislators of Oklahoma intend to prohibit the practice of midwifery,

but allow them to act as midwives, in cases of emergency only, or did they intend to allow midwives to practice their profession without license, and in cases of emergency to practice medicine also.

Illinois in 1907, Vermont in 1906, Wisconsin in 1907 and Michigan in 1907, all have made changes and additions to their medical practice acts. Nowhere in the titles of any of these acts is the word midwife or midwifery found. The same ambiguities that exist in the Oklahoma law are found in others. A part of the late Michigan law reads as follows—"All men or women who wish to begin the practice of medicine or surgery in any of its branches, etc." Michigan only, of the many states corresponded with, makes no distinction as between physicians and midwives, the State Board of Health enforcing upon each exactly the same requirements for license.

It is interesting to note in this connection that the amended law of 1907 of that State is practically the Missouri law of 1883, under which the State Board of Health first issued licenses to midwives. The two boards have taken therefore exactly opposite views of the meaning of the words, "in any of its branches."

These constant evasions of the absolute necessity for regulating midwifery plainly indicates that legislators of other states than our own are occasionally reminiscent of the days when, although rulers of the earth, they were "persona non grata" in the sick room and sat helpless midst a band of old women holding the fate of wife and child in the hollow of their hands.

The legal standing of midwifery therefore remains unsettled so that it can be definitely said that midwifery is not a distinct science, but a department, and only a department of medicine and surgery. According to the better reasonings it would, and the courts would most probably so hold; but there is sufficient doubt to make it advisable in all cases to settle the question by positive statutory regulations.

Another reason that would call for prompt statutory regulations is the extent of the business being done by untrained and unqualified midwives. A careful review of the records of the Health Department of this City for the past five years, shows that 52 per cent. of the business is done by 320 midwives, of whom only about 65 have any considerable business, leaving the remaining 48 per cent. to be divided among some 1800 duly qualified physicians.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, M. D., Chairman. M. B. Clopton, M. D. M. C. Shelton, M. D.

EDITORIAL

THE STATUS OF THE MEDICAL BILLS IN THE LEGISLATURE.

The status of the medical bills now before the Legislature may be regarded as satisfactory to the organized medical profession of the State. This announcement will come as welcome tidings to those members who have used their influence to strengthen the efforts of the committee on public policy and legislation, towards securing favorable action upon the medical bills now in both branches of the General Assembly. To very many members, particularly to the older members of the Association, the fact, that we can speak so encouragingly concerning the progress of the bills, has a wider and deeper significance than is apparent to the younger generation of physicians.

Whilst it is true that the medical bills now pending have reached their present stage in the calendar of the General Assembly only through the intelligent, constant and united efforts of the members of the medical profession and their friends, it is a fact that the opinions of medical men have been received with such measure of respect and consideration as to make it evident that the law makers have abandoned that attitude of indifference, and even of hostility, which was such a pronounced characteristic of Legislatures towards physicians in the past, when the medical profession endeavored to secure the passage of measures appertaining to the practice of medicine. Of course the measures must possess the merit of affording greater protection of the health of the people, or otherwise conserve the welfare of the commonwealth, in order to receive any consideration; but what measure was ever intro-

duced by the profession which did not have these objects for its fundamental basis?

We must not, however, permit ourselves to rest content with what has been accomplished; there is still much more to do before the bills come up for final action. Particularly is this true of the House of Representatives where antagonistic interests have been able to delay favorable consideration upon the medical bills. We urge all members, therefore, to communicate with their representatives at once, and bring to bear all the influence they can to induce favorable action in the House of Representatives on the medical bills having the approval of the State Board of Health or State Committee on Public Policy and Legislation.

MEDICAL HYENAS.

The recent exposures of the nefarious practices of the medical hyenas—those outcast fellows who trail upon the flanks of legitimate medicine—should stir our legislators into framing laws for the protection of the sick and afflicted which would stop forever all such artifices. More fiendish than ghouls, who rob the dead, the medical hyenas prey upon the sufferings of the living, stealing their money while robbing them of all chance of being cured of their maladies. The ghoul is shot when discovered in his depredations, but the medical hyena consults a lawyer when the light of publicity reveals his duplicity.

But even exposure of the fradulent character of his acts often fails to accomplish his annihilation, for the peculiar working of a defective law, when juggled by the chicanery of some legal lights, throws the cloak of protection upon this offender against society. This is never better evidenced than when the State Board of Health cites licensed physicians, whose practices, nevertheless, place them in the medical hyena class, to appear for trial for revocation of their licenses. An especially glaring instance of the ineffectiveness of our laws as applied to illegal practitioners, happened recently in Kansas City when the State Board of Health cited two notorious physicians to appear before it for trial; but, although these persons were under indictment for illegal acts, the board was temporarily restrained by order of court from proceeding in the trial to revoke the licenses, on the ground that the criminal proceedings against the defendants had not been disposed of, and might be prejudiced by a decision of the board against the defendants. To the legal mind this may appear as a happy application of the law, but to the poor sufferer who has been led, through the machinations of medical hyenas, into vices that sap his mental and physical vigor, it must seem nothing less than a miscarriage of justice.

ITINERARY FOR DR. McCORMACK.

Dr. McCormack's visit in the State will begin at St. Joseph on May 3d. After giving an address in that city, he will proceed to Maryville and follow the schedule published below as nearly as possible. It may be necessary to make some changes in the schedule, and any information concerning this can be obtained from Dr. A. W. McAlester, Jr., Bryant Building, Kansas City, Mo., to whom all correspondence regarding Dr. McCormack's visit should be addressed.

The interest that is being aroused among the members in anticipation of Dr. McCormack's tour through the State is a gratifying indication of the enthusiasm that our members feel in regard to the work of the Association. We fear that some societies now anxious to have the Doctor address them will be disappointed since there have been so many requests for his presence, but every effort will be made to include all societies that wish to entertain him.

Local societies should be prepared to receive Dr. McCormack upon his arrival and have all arrangements for the meeting fully completed and the announcement of his visit well advertised to both physicians and the general public.

Dr. McCormack will be in the following places on the dates named and deliver an address in the evening at 8 o'clock.

The local committees will arrange for morning or afternoon meetings.

Town.	Railroad.	Leave.	Town.	Arrive.	Date.
St. Joseph....	Burlington,	10:00 A. M.,	Maryville,	Noon,	Mon., May 3.
Maryville.	Wabash,	11:35 A. M.,	Gallatin,	2:10 P. M.,	Tues., May 4.
Gallatin.	Wabash,	2:10 A. M.,	Chillicothe,	2:52 P. M.,	Wed., May 5.
Chillicothe. . ..	Burlington,	11:50 A. M.,	Macon,	1:37 P. M.,	Thurs., May 6.
Macon.	Wabash,	2:45 P. M.,	Kirksville,	3:57 P. M.,	Thurs., May 6.
Kirksville.	Burlingon,	6:20 A. M.,	Hannibal,	10:55 A. M.,	Fri., May 7.
Hannibal.	Wabash,	10:50 A. M.,	Moberly,	1:25 P. M.,	Sat., May 8.
Moberly.	Wabash,	6:10 A. M.,	Columbia,	8:10 A. M.,	Sun., May 9;
or Moberly . ..	Wabash,	10:05 A. M.,	Columbia,	1:30 P. M.,	Sun., May 9.
		Spend Sunday in Columbia.			
Columbia. . . .	M. K. & T.,	3:10 P. M.,	Sedalia,	6:25 P. M.,	Tues., May 11.
Sedalia.	Mo. Pacific,	2:55 P. M.,	Lexington,	5:25 P. M.,	Wed., May 12.
Lexington. . . .	Mo. Pacific,	7:23 A. M.,	Kansas City,	9:40 A. M.,	Thurs., May 13.
		Spend 13th and 14th in Kansas City.			
Kansas City. ..	C. M. & St. P.,	9:00 A. M.,	Liberty,	9:45 A. M.,	Sat., May 15.
		Spend Sunday in Kansas City.			
Kansas City. ..	Mo. Pacific,	10:10 A. M.,	Warrensburg,	12:15 P. M.,	Mon., May 17.
Warrensburg. .	Mo. Pacific,	9:27 A. M.,	Jefferson City,	1:00 P. M.,	Tues., May 18.
		Spend 18th, 19th and 20th in Jefferson City.			
N. Jeff. City..	M. K. & T.,	5:07 A. M.,	Clinton,	10:52 A. M.,	Fri., May 21.
Clinton.	M. K. & T.,	10:52 A. M.,	Nevada,	12:25 P. M.,	Sat., May 22.
		Spend Sunday in Nevada or Joplin.			
Nevada.	Mo. Pacific,	5:25 A. M.,	Joplin,	9:00 A. M.,	Sun. or Mon., May 23 or 24.
Joplin.	Frisco,	7:20 A. M.,	Aurora,	11:55 A. M.,	Tues., May 25.
Aurora.	Frisco,	11:55 A. M.,	Springfield,	12:50 A. M.,	Wed., May 26.
Springfield. . ..	Frisco,	12:05 A. M.,	St. Louis,	7:15 A. M.,	Thurs., May 27.
		Spend 27th and 28th in St. Louis.			
St. Louis.....	Trains every hour for St. Charles.			St. Charles,	Sat., May 29.
		Spend Sunday in St. Louis.			
St. Louis. . . .	Frisco,	8:00 A. M.,	C. Girardeau,	12:45 P. M.,	Mon., May 31.

THE OPTOMETRY BILL DEFEATED.

The bill to create a board of examiners in optometry, the provisions of which in effect entitled opticians to practice ophthalmology, was reported unfavorably by the Senate committee on public health and scientific institutions and will not, therefore, be further considered at this session of the Legislature.

The defeat of this bill was accomplished through the earnest work of the members of the medical profession who appeared before the committee to speak against its adoption. The work of these gentlemen was made more effective by the coöperation of some of the opticians of St. Louis and Kansas City, who testified that the optometry bill was a measure which should not be approved, and by the splendid work of Mr. Theo. Hagenow, of St. Louis, who sacrificed his own interests to assist the physicians in presenting effective arguments against the adoption of the bill.

This action reflects great credit upon the intelligence and farsightedness of the gentlemen who composed the Senate committee on public health and scientific institutions, for the decision to report the bill unfavorably was not arrived at until after a faithful hearing had been granted both the adherents and the opponents of the bill—in fact a rehearing was granted at the request of Mr. Brasfield, who introduced the bill.

In thus deciding against optometry, the committee has earned the thanks of the medical profession, as well as of all the people, for the public health has been truly safeguarded, and the dignity of our calling has thereby been preserved in no small degree.

ST. LOUIS SKIN AND CANCER HOSPITAL.

The work of the St. Louis Skin and Cancer Hospital forms an interesting chapter in the medical life of St. Louis, and promises to bring this institution into as great prominence as a center of research in the study of the cause and cure of this dreadful malady as now attaches to the Rockefeller Institute; and indeed the character of the work already done at the St. Louis Skin and Cancer Hospital has attracted the attention of cancer specialists not only in this country but in all centers throughout the world where the study of cancer has become a recognized specialty, through the scientific publications of the members of the staff. The exhibit of the specimen from the hospital and the report of the work done by its staff, presented by one of its members at the Second Congress of the International Surgical Society, held at Brussels in 1908, where the

subject of cancer was the topic for consideration during the entire session, created much favorable comment. The acetone treatment of uterine cancer, now generally accepted as the best method of treating inoperable cases, was originated by one of the members of its staff, and the use of Lumière's color photography for record of skin diseases, was first practiced in this country at this institution whilst the photographic work of the hospital ranks with the highest quality of work of this kind done anywhere.

During 1908 the number of hospital patients increased 50 per cent., while the number of operations performed showed a similar increase of 50 per cent. This high increase in the number of operations performed for cancerous conditions demonstrates the educational value of this institution in enlightening the public as to the necessity of submitting to surgical intervention at an earlier period of infection than was possible before the aims of an institution of this character were understood.

The announcement is made that post-graduate instruction in cancerous and skin diseases will be given to physicians as soon as the new buildings are erected.

EDITORIAL NOTES

Since the publication of New and Non-Official Remedies, 1909, the Council has acted on the following products:

Articles accepted for N. N. R.:

Brovalol (Schering & Glatz).
Medinal (Schering & Glatz).
Veronal Sodium (Farbenfabriken of Elberfeld Co.).
Agurin Tablets, 5 grs. (Farbenfabriken).
Citarin Tablets, 15 grs. (Farbenfabriken).
Hedonal Tablets, 8 grs. (Farbenfabriken).
Iodothyrine Tablets, 5 grs. (Farbenfabriken).
Novaspirin Tablets, 5 grs. (Farbenfabriken).
Piperazine Tablets, 16 grs. (Farbenfabriken).
Sajodin Tablets, 8 grs. (Farbenfabriken).
Acet-Theocin-Sodium Tablets, 4 grs. (Farbenfabriken).
Veronal Tablets, 5 grs. (Farbenfabriken).

Articles accepted for N. N. R. Appendix:

Tabloid Coffee Mint (Burroughs, Wellcome & Co.).
Maltine (Maltine Co.).

Article reconsidered and rejected:

Migrainin (Koechl & Co.).

MEDICAL BILLS IN THE SENATE.

Below we publish several bills now pending in the General Assembly which are of special interest to the members of our Association. The vital statistics bill (Senate Bill No. 149) is probably the most important of these. This bill has passed the Senate and will come up for consideration in the House in a few days. Senate Bill No. 334, provides that the license of any physician when revoked by the State Board of Health shall stand revoked pending the disposition of an appeal to the courts when such appeal has been resorted to. This bill has also passed the Senate. Senate Bill No. 411 is also an important measure which we hope will be favorably considered.

We urge that all members communicate with the members of the House of Representatives and request their support of these measures, which, if passed, will place Missouri in the rank of States that sedulously guard and preserve the health and welfare of their citizens.

Bills referred to read as follows:

VITAL AND MORTUARY STATISTICS.

Senate Bill No. 149 is an act to provide for the registration of all births and deaths throughout the State.

Section 1. That it shall be the duty of the State Board of Health to have charge of the State system of registration of births and deaths; to prepare the necessary methods, forms and blanks for obtaining and preserving such records and to insure the faithful registration of the same in the registration districts and in the central bureau of vital statistics at the capital of the State. The said board shall be charged with the uniform and thorough enforcement of the law throughout the State, and shall from time to time promulgate any additional forms and amendments that may be necessary for this purpose.

Sec. 2. That the secretary of the State Board of Health shall have supervision over the central bureau of vital statistics, which is hereby authorized to be established by said board, and shall act as State registrar of vital statistics. As secretary he shall receive an annual salary at the rate of twenty-four hundred dollars, payable monthly. The State Board of Health shall provide for such clerical and other assistance as may be necessary for the purpose of this act, who shall serve during the pleasure of the board, and may fix the compensation of persons thus employed within the amount appropriated therefor by the legislature. Suitable apartments shall be provided by the custodian of the capitol for the bureau of vital statistics and the State Board of Health in the state capitol at Jefferson City, which shall be properly equipped with fireproof vault and filing cases for the permanent and safe preservation of all official records made and returned under this act.

Sec. 3. That for the purposes of this act the State shall be divided into registration districts as follows: Each city and incorporated town shall constitute a primary registration district; and for that portion of each county outside of the cities and incorporated towns therein, the State Board of Health shall define and designate the boundaries of a sufficient number of rural registration districts, which it may change from time to time as may be necessary to insure the convenience and completeness of registration.

Sec. 4. That within ninety days after the taking effect of this act, or as soon thereafter as possible, the State Board of Health shall appoint a local registrar of vital statistics for each registration district in the State. The term of office of local registrars, appointed by said board, shall be for four years, beginning with the first day of January of the year in which this act shall take effect, and their successors shall be appointed at least ten days before the expiration of their terms of office; provided that in cities where health officers or other officials are conducting effective registration of births and deaths under local ordinances at the time of the taking effect of this act, such officers shall be continued as registrars in and for such cities, and shall be subject to the rules and regulations of the State registrar, and to all of the provisions of this act. Any local registrar appointed by said board who fails or neglects to discharge efficiently the duties of his office as laid down in this act, or who fails to make prompt and complete returns of births and deaths, as required thereby, shall be forthwith removed from his office by the State Board of Health, and his successor appointed, in addition to any other penalties that may be imposed, under other sections of this act, for failure or neglect to perform his duty. Each local registrar appointed by said board shall, immediately upon his acceptance of appointment as such, appoint a deputy, whose duty it shall be to act in his stead in case of absence, illness or disability, and who shall accept such an appointment in writing, and who shall be subject to all rules and regulations governing the action of local registrars. And when it may appear necessary for the convenience of the people in any registration district, the local registrar is hereby authorized, with the approval of the State registrar, to appoint one or more suitable persons to act as sub-registrars, who shall be authorized to receive certificates and to issue burial or removal permits in and for such portions of the registration district as may be designated; and each sub-registrar shall note, over his signature, the date on which each certificate was filed, and shall forward all certificates to the registrar of the district within ten days, and in all cases before the third day of the following month; provided, that all sub-registrars shall be subject to the supervision and control of the State registrar, and may be by him removed for neglect or failure to perform their duties in accordance with the provisions of this act or the rules and regulations of the State registrar, and they shall be liable to the same penalties for neglect of duties as the local registrar.

Sec. 5. That the body of any person whose death occurs in the State shall not be interred, deposited in a vault or tomb, cremated or otherwise disposed of, or removed from or into any registration district until a permit for burial, removal or other disposition shall have been properly issued by the local registrar of the registration district in which the death occurs. And no such burial or removal permit shall be issued by any registrar until a complete and satisfactory certificate of death has been filed with him as hereinafter provided; provided, that when a dead body is transported by common carrier into a registration district in Missouri for burial, then the transit and removal permit, issued in accordance with the law and health regulations of the place where the death occurred, when said death occurs outside of the State of Missouri, shall be accepted by the local registrar of the district, into which the body has been transported for burial or other disposition, as a basis upon which he shall issue a local burial permit, in the same way as if the death occurred in his district, but shall plainly enter upon the face of the burial permit the fact that it was a body shipped in for interment,

and give the actual place of death; but a burial permit shall not be required from the local registrar of the district in which interment is made, when a body is removed from one district in Missouri to another in the State, for purpose of burial or other disposition, either by common carrier, hearse, or other conveyance; and no local registrar shall, as such, require from undertakers or persons acting as undertakers any fee for the privilege of burying dead bodies.

Sec. 6. That stillborn children or those dead at birth shall be registered as births and also as deaths, and a certificate of both the birth and death shall be filed with the local registrar, in the usual form and manner, the certificate of birth to contain, in place of the name of the child, the word "stillbirth." The medical certificate of the cause of death shall be signed by the attending physician, if any, and shall state the cause of death as "stillborn," with the cause of the stillbirth, if known, whether a premature birth, and, if born prematurely, the period of uterine gestation, in months, if known; and a burial or removal permit in the usual form shall be required. Midwives shall not sign certificates of death for stillborn children; but such cases, and stillbirths occurring without attendance of either physician or midwife, shall be treated as deaths without medical attendance, as provided for in section 8 of this act.

Sec. 7. That the certificate of death shall contain the following items:

(1) Place of death, including state, county, township, city, the ward, street and house number. If in a hospital or other institution, the name of the same to be given instead of the street and house number. If in an industrial camp, the name of the camp to be given.

(2) Full name of decedent. If an unnamed child, the surname preceded by "unnamed."

(3) Sex.

(4) Color or race—as white, black (negro or negro descent), Indian, Chinese, Japanese, or other.

(5) Conjugal condition—as single, married, widowed or divorced.

(6) Date of birth, including the year, month, and day.

(7) Age in years, months, and days.

(8) Place of birth; city or town, state or foreign country.

(9) Name of father.

(10) Birthplace of father; state or foreign country.

(11) Maiden name of mother.

(12) Birthplace of mother; city or town, state or foreign country.

(13) Occupation. The occupation to be reported of any person who had any remunerative employment; women as well as men.

(14) Signature and address of informant.

(15) Date of death, including the year, month, and day.

(16) Statement of medical attendant of decedent, fact and time of death, including the time last seen alive.

(17) Cause of death, including the primary and contributory causes or complications, if any, and duration of each.

(18) Signature and address of physician or official making the medical certificate.

(19) Length of residence at place of death and in State. Special information concerning deaths in hospitals and institutions, and of persons dying away from home, including the former or usual residence, and place where the disease was contracted.

(20) Place of burial or removal.

(21) Date of burial or removal.

(22) Signature and address of undertaker.

(23) Official signature of registrar, with the date when certificate was filed, and registered number.

The personal and statistical particulars (items 1 to 13) shall be authenticated by the signature of the informant, who may be any competent person acquainted with the facts.

The statement of facts relating to the disposition of the body shall be signed by the undertaker or person acting as such.

The medical certificate shall be made and signed by the physician, if any, last in attendance on the deceased, who shall specify the time in attendance, the time he last saw the deceased alive and the hour of the day at which the death occurred. And he shall further state the cause of death, so as to show the course of disease or sequence of causes resulting in the death, giving the primary cause, and also the contributory causes, if any, and the duration of each. Indefinite and unsatisfactory terms, indicating only symptoms of disease or conditions resulting from disease, will not be held sufficient for issuing a burial or removal permit; and any certificate containing only such terms as defined by the State registrar shall be returned to the physician for correction and definition. Causes of death, which may be the result of either disease or violence, shall be carefully defined; and, if from violence, its nature shall be stated, and whether (probably) accidental, suicidal, or homicidal. And in case of deaths in hospitals, institutions, or away from home, the physician shall furnish the information required under this head (item 20), and shall state where, in his opinion, the disease was contracted.

Sec. 8. That in case of any death occurring without medical attendance, it shall be the duty of the undertaker to notify the registrar of such deaths, and when so notified the registrar shall inform the local health officer and refer the case to him for immediate investigation and certification, prior to issuing the permit; provided, that when the local health officer is not a qualified physician, or when there is no such official, and in such cases only, the registrar is authorized to make the certificate and return from the statement of relatives or other persons having adequate knowledge of the facts; provided, further, that if the circumstances of the case render it probable that the death was caused by unlawful or suspicious means, the registrar shall then refer the case to the coroner for his investigation and certification. And any coroner whose duty it is to hold an inquest on the body of any deceased person, and to make the certificate of death required for a burial permit, shall state in his certificate the name of the disease causing death, or the means of death; causes or violence, and whether (probably) accidental, suicidal, or homicidal, as determined by the inquest; and shall, in either case, furnish such information as may be required by the State registrar properly to classify the death.

Sec. 9. That the undertaker, or person acting as undertaker, shall be responsible for obtaining and filing the certificate of death with the local registrar of the district in which the death occurred, and securing a burial or removal permit, prior to any disposition of the body. He shall obtain the personal and statistical particulars required from the person best qualified to supply them, over the signature and address of his informant. He shall then present the certificate to the attending physician, if any, or to the health officer or coroner, as directed by the local registrar, for the medical certificate of the cause of death and other particulars necessary to complete the record, as specified in Section

8. And he shall then state the facts required relative to the date and place of burial, over his signature and with his address, and present the completed certificate to the local registrar, who will issue a permit for burial, removal or other disposition of the body. The undertaker shall deliver the burial permit to the sexton, or person in charge of the place of burial, before interring or otherwise disposing of the body; or shall attach the transit permit containing the registration removal permit to the box containing the corpse, when shipped by any transportation company; said permit to accompany the corpse to its destination, where, if within the State of Missouri, it shall be delivered to the sexton or other person in charge of the place of burial.

Sec. 10. That if the interment, or other disposition of the body is to be made within the State, the wording of the burial permit may be limited to a statement by the registrar, and over his signature that a satisfactory certificate of death having been filed with him, as required by law, permission is granted to inter, remove, or otherwise dispose of the deceased, stating the name, age, sex, cause of death, and other necessary details upon the form prescribed by the State registrar.

Sec. 11. That no sexton or person in charge of any premises in which interments are made shall inter or permit the interment or other disposition of any body unless it is accompanied by a burial, removal or transit permit, as herein provided. And each sexton, or person in charge of any burial ground, shall indorse upon the permit the date of interment, over his signature, and shall return all permits so indorsed to the local registrar of his district within ten days from the date of interment, or within the time fixed by the local board of health. He shall also keep a record of all interments made in the premises under his charge, stating the name of the deceased person, place of death, date of burial, and name and address of the undertaker; which record shall at all times be open to public inspection.

Sec. 12. That all births that occur in the State shall be immediately registered in the districts in which they occur, as hereinafter provided.

Sec. 13. That it shall be the duty of the attending physician or midwife to file a certificate of birth, properly and completely filled out, giving all the particulars required by this act, with the local registrar of the district in which the birth occurred, within ten days after the date of the birth. And if there be no attending physician or midwife, then it shall be the duty of the father or mother of the child, householder or owner of the premises, manager or superintendent of public or private institutions in which the birth occurred, to notify the local registrar, within ten days after the birth, of the fact of such a birth having occurred. It shall then, in such case, be the duty of the local registrar to secure the necessary information and signature to make a proper certificate of birth; provided, that in cities the certificate of birth shall be filed at a less interval than ten days after birth, if so required by municipal ordinance (or regulations) now in force or that may hereafter be enacted.

Sec. 14. That the certificate of birth shall contain the following items:

(1) Place of birth, including state, county, township or town, village or city. If in a city, the ward, street, and house number; if in a hospital or other institution, the name of the same to be given, instead of the street and house number.

(2) Full name of child. If the child dies without a name, before the certificate is filed, enter the words "died unnamed." If the living

child has not yet been named at the date of filing certificate of birth, the space for "full name of child" is to be left blank, to be filled out subsequently by a supplemental report, as hereinafter provided.

(3) Sex of child.

(4) Whether a twin, triplet, or other plural birth. A separate certificate shall be required for each child in case of plural birth, giving number of child in order of birth.

(5) Whether legitimate or illegitimate.

(6) Full name of father.

(7) Residence of father.

(8) Color or race of father.

(9) Birthplace of father; city or town, state or foreign country.

(10) Age of father at last birthday, in years.

(11) Occupation of father.

Answers shall not be recorded to articles 6, 7, 8, 9, 10 and 11 in case of illegitimate births.

(12) Maiden name of mother.

(13) Residence of mother.

(14) Color or race of mother.

(15) Birthplace of mother; city or town, state or foreign country.

(16) Age of mother at last birthday, in years.

(17) Occupation of mother.

(18) Number of child of this mother, and number of children of this mother now living.

(19) Born at full term.

(20) The certificate of attending physician or midwife as to attendance at birth, including statement of year, month, day and hour of birth, and whether the child was alive or dead at birth. This certificate shall be signed by the attending physician or midwife, with date of signature and address; if there is no physician or midwife in attendance, then the father or mother of the child, householder or owner of the premises, or manager or superintendent of public or private institution, or other competent person, whose duty it shall be to notify the local registrar of such birth, as required by Section 13 of this act.

(21) Exact date of filing in office of local registrar, attested by his official signature, and registered number of birth, as hereinafter provided.

All certificates, either of birth or death, shall be written legibly, in unfading black ink, and no certificate shall be held to be complete and correct that does not supply all of the items of information called for herein, or satisfactorily account for their omission.

Sec. 15. That when any certificate of birth of a living child is presented without the statement of the given name, then the local registrar shall make out and deliver to the parent of the child a special blank for the supplemental report of the given name of the child, which shall be filled out as directed, and returned to the local registrar as soon as the child shall have been named.

Sec. 16. That every physician, midwife and undertaker shall, without delay, register his or her name, address and occupation with the local registrar of the district in which he or she resides, or may hereafter establish a residence; and shall thereupon be supplied by the local registrar with a copy of this act, together with such rules and regulations as may be prepared by the State registrar relative to its enforcement. Within thirty days after the close of each calendar year each local registrar shall make a return to the State registrar of all

physicians, midwives or undertakers who have been registered in his district during the whole or any part of the preceding calendar year; provided, that no fee or other compensation shall be charged by local registrars to physicians, midwives or undertakers for registering their names under this section or making returns thereof to the State registrar.

Sec. 17. That all superintendents or managers, or other persons in charge of hospitals, almshouses, lying-in or other institutions, public or private to which persons resort for treatment of disease, confinement, or are committed by process of law, are hereby required to make a record of all the personal and statistical paticulars relative to the inmates in their institutions at the date of approval of this act, that are required in the form of the certificate provided for by this act, as directed by the State registrar; and thereafter such record shall be, by them, made for all future inmates at the time of their admission. And in case of persons admitted or committed for medical treatment of disease, the physician in charge shall specify for entry in the record, the nature of the disease, and where, in his opinion, it was contracted. The personal particulars and information required by this section shall be obtained from the individual himself if it is practicable to do so; and when they cannot be so obtained, they shall be secured in as complete a manner as possible from relatives, friends, or other persons acquainted with the facts.

Sec. 18. That the State registrar shall prepare, print and supply to all registrars all blanks and forms used in registering, recording and preserving the returns, or in otherwise carrying out the purposes of this act; and shall prepare and issue such detailed instructions as may be required to secure the uniform observance of its provisions and the maintenance of a perfect system of registration. And no other blanks shall be used than those supplied by the State registrar. He shall carefully examine the certificates received monthly from the local registrars, and if any such are incomplete or unsatisfactory he shall require such further information to be furnished as may be necessary to make the record complete and satisfactory. And all physicians, midwives, informants or undertakers connected with any case, and all other persons having knowledge of the facts, are hereby required to furnish such information as they may possess regarding any birth or death upon demand of the State registrar, in person, by mail, or through the local registrar. He shall further arrange, bind and permanently preserve the certificates in a systematic manner, and shall prepare and maintain a comprehensive and continuous card index of all births and deaths registered; the cards to show the name of child or deceased, place and date of birth or death, number of certificate, and the volume in which it is contained. He shall inform all registrars what diseases are to be considered as infectious, contagious, or communicable and dangerous to the public health, as decided by the State Board of Health, in order that when deaths occur from such diseases proper precautions may be taken to prevent the spreading of dangerous diseases.

Sec. 19. That it shall be the duty of the local registrars to supply blank forms of certificates to such persons as require them. Each local registrar shall carefully examine each certificate of birth or death when presented for record, to see that it has been made out in accordance with the provisions of this act and the instructions of the State registrar; and if any certificate of death is incomplete or unsatisfactory, it shall be his duty to call attention to the defects in the return, and to withhold issuing the burial or removal permit until they are corrected. If the

certificate of death is properly executed and complete, he shall then issue a burial or removal permit to the undertaker; provided, that in case the death occurred from some disease that is held by the State Board of Health to be infectious, contagious, or communicable and dangerous to the public health, no permit for the removal or other disposition of the body shall be granted by the registrar, except under such conditions as may be prescribed by the State Board of Health. If a certificate of birth is incomplete, he shall immediately notify the informant, and require him to supply the missing items if they can be obtained. He shall then number consecutively the certificates of birth and death, in two separate series, beginning with the "number one" for the first birth and the first death in each calendar year, and sign his name as registrar in attest of the date of filing in his office. He shall also make a complete and accurate copy of each birth and death certificate registered by him in a record book of approved form, to be kept and permanently preserved in his office as the local record of such birth and death, in such manner as directed by the State registrar. And he shall, on the tenth day of each month, transmit to the State registrar all original certificates registered by him during the preceding month. And if no births or deaths occured in any month, he shall, on the tenth day of the following month, report that fact to the state registrar, on a card provided for this purpose.

Sec. 20. That each local registrar shall be entitled to be paid the sum of twenty-five cents for each birth and each death certificate properly and completely made out and registered with him, and correctly copied and duly returned by him to the State registrar, as required by this act. And in case no births or deaths were registered during any month, the local registrar shall be entitled to be paid the sum of twenty-five cents for each report to that effect, promptly made in accordance with this act. All amounts payable to registrars under provisions of this section shall be paid by the treasurer of the county in which the registration districts are located, upon certification by the State registrar. And the State registrar shall annually certify to the treasurers of the several counties the number of births and deaths registered, with the names of the local registrars and the amounts due each at the rates fixed herein.

Sec. 21. That the State registrar shall, upon request, furnish any applicant a certified copy of the record of any birth or death registered under provisions of this act, for the making and certification of which he shall be entitled to a fee of fifty cents, to be paid by the applicant. And any such copy of the record of a birth or death, when properly certified by the State registrar to be a true copy thereof, shall be prima facie evidence in all courts and places of the facts therein stated. For any search of the files and records when no certified copy is made, the State registrar shall be entitled to a fee of fifty cents for each hour or fractional hour of time of search, to be paid by the applicant. And the State registrar shall keep a true and correct account of all fees by him received under these provisions, and turn the same over to the State treasurer.

Sec. 22. That if any physician who was in medical attendance upon any deceased person at the time of death shall neglect or refuse to make out and deliver to the undertaker, sexton, or other person in charge of the interment, removal, or other disposition of the body, upon request, the medical certificate of the cause of death, hereinbefore provided for, he shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than five dollars nor more than fifty dollars.

And if any physician shall knowingly make a false certification of the cause of death, in any case, he shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than fifty dollars nor more than two hundred dollars. And any physician or midwife in attendance upon a case of confinement, or any other person charged with responsibility for reporting births, in the order named in Section 13 of this act, who shall neglect or refuse to file a proper certificate of birth with the local registrar, within the time required by this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than five dollars nor more than fifty dollars. And if any undertaker, sexton, or other person acting as undertaker, shall inter, remove, or otherwise dispose of the body of any deceased person, without having received a burial or removal permit as herein provided, he shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not less than twenty dollars nor more than one hundred dollars. And any registrar, deputy registrar, or subregistrar who shall neglect or fail to enforce the provisions of this act in his district, or shall neglect or refuse to perform any of the duties imposed upon him by this act or by the instructions and directions of the State registrar, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than ten dollars nor more than one hundred dollars. And any person who shall wilfully alter any certificate of birth or death, or the copy of any certificate of birth or death, on file in the office of the local registrar, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not less than ten dollars nor more than one hundred dollars, or be imprisoned in the county jail not exceeding sixty days, or suffer both fine and imprisonment, in the discretion of the court. And any other person or persons who shall violate any of the provisions of this act, or who shall wilfully neglect or refuse to perform any duties imposed upon them by the provisions of this act, or shall furnish false information to a physician, undertaker, midwife, or informant, for the purpose of making incorrect certification of births or deaths, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than five dollars nor more than one hundred dollars. And any transportation company or common carrier transporting or carrying, or accepting through its agents or employes for transportation or carriage, the body of any deceased person, without an accompanying permit issued in accordance with the provisions of this act, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than fifty dollars nor more than two hundred dollars; provided, that in case the death occurred outside of the State and the body is accompanied by a certificate of death, burial or removal, or transit permit issued in accordance with the law or board of health regulations in force when the death occurred, such death certificate, burial or removal or transit permit may be held to authorize the transportation or carriage of the body into or through the State.

Sec. 23. That local registrars are hereby charged with the strict and thorough enforcement of the provisions of this act in their districts, under the supervision and direction of the State registrar. And they shall make an immediate report to the State registrar of any violation of this law coming to their notice by observation or upon complaint of any person, or otherwise. The State registrar is hereby charged with the thorough and efficient execution of the provisions of this act in every part of the State, and with the supervisory power over local registrars, to the end that all the requirements shall be uniformly com-

plied with. He shall have authority to investigate cases of irregularity or violation of law, personally or by accredited representative, and all registrars shall aid him, upon request, in such investigations. When he shall deem it necessary, he shall report cases of violation of any of the provisions of this act to the prosecuting attorney or official of the proper county or municipality, with a statement of the facts and circumstances; and when any such case is reported to them by the State registrar, all prosecuting attorneys or officials acting in such capacity, shall forthwith initiate and promptly follow up the necessary court proceedings against the parties responsible for the alleged violations of law. And upon request of the State registrar, the attorney-general shall likewise assist in the enforcement of the provisions of this act.

Sec. 24. That all laws and parts of laws inconsistent with the provisions of this act are hereby repealed; and no system for the registration of births and deaths shall be continued or maintained in any of the several municipalities of this state other than one provided for and established by this act.

[This bill has passed the Senate.—Ed.]

GIVING STATE BOARD OF HEALTH AUTHORITY TO SUBPŒNA WITNESSES.

Senate Bill No. 150 is an act empowering the State Board of Health to subpœna witnesses and to require the production of books and papers before it.

Section 1. The State Board of Health shall have power to subpœna witnesses and require the production of books and papers before it. When the attendance of any person as a witness may be required a subpœna may be issued by and under the hand of the president, secretary, or a majority of the board; and also requiring any witness to bring with him books and papers.

Sec. 2. Such subpœnas shall be served as provided by law for service of subpœnas of courts of record, and the return thereon shall be prima facie evidence of the facts recited therein.

Sec. 3. Every person who, having been subpœnaed as a witness by the board to give testimony or to produce books and papers upon any matter under inquiry before the board, wilfully makes default, or who, having appeared, refuses to answer any question pertinent to the matter under inquiry, shall be guilty of a misdemeanor and upon conviction therefor shall be fined not less than fifty ($50) dollars nor more than five hundred ($500) dollars, or imprisonment in the county jail not to exceed six months, or both such fine and imprisonment.

[This bill has passed the Senate.—Ed.]

TO PROHIBIT THE PRACTICE OF MEDICINE PENDING APPEAL TO THE COURTS FOR REVOCATION OF LICENSE.

Senate Bill No. 334 is an act to repeal Section 7 of the medical practice act, approved April 4, 1907, and to enact a new section providing for the revocation of the right to practice medicine in this State and procedure thereon.

Section 1. That Section 7 of an act of the General Assembly of this State (approved March 12, 1901) entitled: "An act to regulate the practice of medicine, surgery and midwifery, and to prohibit treating the sick and afflicted without a license, and to provide penalties for the violation thereof," as amended by act of the General Assembly of this State, approved April 4, 1907, be and the same is hereby repealed and a new section to be numbered Section 7 is hereby enacted in lieu of said section so repealed as follows, to-wit:

"Section 7. The board may refuse license to individuals guilty of unprofessional or dishonorable conduct, and they may revoke licenses, or other right to practice, however derived, for like cause after giving the accused an opportunity to be heard in his defense before the board. Habitual drunkenness or excessive use of narcotics or producing criminal abortion shall be deemed unprofessional and dishonorable conduct within the meaning of this section, but this specification is not intended to exclude all other acts for which licenses may be revoked, but any person whose license has been or shall be revoked by the board shall have the right to have the proceedings of said board revoking his license reviewed, on a writ or certiorari by the circuit court of the county in which said board held its session when said license was revoked. Said writ shall issue, upon the petition of the person, whose license shall have been revoked, to said court or to the clerk thereof in vacation of court and shall command the said board, or the secretary thereof, to certify to said court the record and proceedings of said board or a complete transcript thereof pertaining to the revocation of said license. The petitioner for the writ of certiorari shall so set forth the rights of the petitioner, and the injuries complained of by him as to show that the petitioner is entitled to the writ and shall be verified by him. If the proceedings of the board shall be sustained or upheld by the circuit court, its order, decision or judgment revoking said license shall remain and continue in full force and effect. Such license pending said review on certiorari shall stand revoked and so remain until the proceedings of the board relating thereto shall be quashed or otherwise annulled by the circuit court on said writ of certiorari."

PROHIBITING CERTAIN CLASSES OF MEDICAL ADVERTISING.

Senate Bill No. 411 is an act to prohibit certain classes of medical advertising.

Section 1. Any person who shall advertise, in his own name, or the name of another person, firm, pretended firm, association, corporation, or pretended corporation, in any newspaper, circular, or by any other means, the treatment of, curing of, or medicines for venereal diseases, the restoration of lost manhood, or lost vitality, or diseases caused by sexual weakness, self abuse, or excessive sexual indulgence; or who shall advertise, in any manner, any medicine, drug, appliance, or any means whatever, whereby it is claimed that miscarriage or abortion may be produced, or conception prevented; or who shall advertise any place where abortions are or will be produced, shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than one hundred dollars, nor more than five hundred dollars, and imprisonment in the county jail for not less than three months.

FIFTY-SECOND ANNUAL MEETING, JEFFERSON CITY, MAY 18-21, 1909.

PRELIMINARY PROGRAM.

SURGICAL SECTION.

Edward G. Blair, M. D.....Kansas City
"The Treatment of Parenchymatous and Exophthalmic Goitres."
Vilray Papin Blair, M. D.....St. Louis
"The Proper Age at Which to Operate for Clefts of the Hard Palate."
Rodney J. Bunch, M. D.....St. Louis
"Surgical Treatment of Amebic Dysentery by Appendicostomy."
G. Wiley Broome, M. D.....St. Louis
"Compound Fractures and Remote Effects Under Prevailing Treatment."
James Moores Ball, M. D.....St. Louis
"Dr. Adam Hammer, Surgeon and Apostle of Higher Medical Education."
W. H. Coffey, M. D.....Kansas City
"Excision of Lower Part of Rectum." Report of Case.
A. H. Cordier, M. D.....Kansas City
"Neoplasm of the Testicle."
G. W. Cale, Jr., M. D.....St. Louis
"A Case of Congenital Absence of the Gall Bladder, in Which Appendicitis Produced the Symptoms of Gall Stone Disease."
H. S. Crossen, M. D.....St. Louis
"Ectopic Gestation Symptoms in Gonorrhœal Salpingitis Cases."
Jno. McH. Dean, M. D.....St. Louis
"Dysmenorrhœa."
Wm. S. Deutsch, M. D.....St. Louis
"Stunts in Surgery."
Davis Forster, M. D.....St. Louis
"Ovarian Tumor Complicating Pregnancy, With Recovery After Operation."
Robt. M. Funkhouser, M. D.....St. Louis
"Some Remarks Regarding Gall Bladder Disease."
Pinckney French, M. D.....St. Louis
"Abdominal Incision."
George Gellhorn, M. D.....St. Louis
"The Causes of Amenorrhœa."
B. Clark Hyde, M. D.....Kansas City
"Report of a Case of Shoulder-Joint Amputation with Peculiar Sequelæ."
Ernst Jonas, M. D.....St. Louis
"Undescended Testicle and Malignant Degeneration."
Jabez N. Jackson, M. D.....Kansas City
"Membranous Pericolitis."
Walter C. G. Kirchner, M. D.....St. Louis
"Illustrative Cases of Intestinal Obstruction, With Remarks on Diagnosis and Treatment."
T. F. Lockwood, M. D.....Butler, Mo.
"Problems and Possibilities of a Country Practitioner from a Surgical Standpoint."

W. E. Leighton, M. D.....St. Louis
"Anæsthesia."
A. B. Miller, M. D.....Macon, Mo.
"The Relation of the Physician and Surgeon in Appendicitis Cases."
C. C. Morris, M. D.....St. Louis
"Practical Points in Abdominal Surgery."
J. H. Morroway, M. D.....Ridgeway, Mo.
"Some Diagnostic Points."
Max W. Myer, M. D.....St. Louis
"Regurgitant Vomiting, Due to Unusual Adhesions, Following Gastro-enterostomy with Pyloric Exclusion."
Ernest G. Mark, M. D.....Kansas City
"Bladder Stone: Its Diagnosis and Treatment."
C. M. Nicholson, M. D.....St. Louis
"A Study of the Action of Scopolamine-Morphine on the Heart, Liver and Kidneys, with a Report of Six Hundred and Fifty Cases of Scopolamine-Morphine Administered as a Preliminary to General Anæsthesia."
Archer O'Rielly, M. D.....St. Louis
"Modern Ideas of Chronic Rheumatism."
T. E. Potter, M. D.....St. Joseph, Mo.
"Intestinal Obstruction with Special Reference to Paresis of the Bowels."
Louis Rassieur, M. D.....St. Louis
"Report of Two Cases of Injury to the Heart."
J. H. Roney, M. D.....Lawson
"Skin Stretching and History of Cases."
Francis Reder, M. D.....St. Louis
"Remarks on Tumors of the Parotid Gland."
Robert E. Schlueter, M. D.....St. Louis
"Remote Effects of Abdominal Injuries."
M. G. Seelig, M. D.....St. Louis
"The Physiology of Shock."
Jno. D. Seba, M. D.....Bland
"The Open Method of Treating Infected Joints, with Report of a Case."
Wm. W. Stevens, M. D.....Kansas City
"Anæsthesia."
C. H. Suddarth, M. D.....Smithville, Mo.
"Radical Operation for Hernia; as Seen by the Country Surgeon."
J. H. Tanquary, M. D.....St. Louis
"Fracture of the Neck of the Femur."
Luther A. Todd, M. D.....St. Joseph
"A Critical Review of a Series of Appendix Cases."
J. S. Wallace, M. D.....Brunswick
"Modern Methods in the Surgical Treatment of Rectal Diseases."
C. W. Watts, M. D.....Fayette
"Report of a Case of Osteosarcoma."
Charles Hodge Wallace, M. D.....St. Joseph
"Unilateral Suppurative Infection of the Kidney."

The following have promised papers, but as yet have not submitted titles:

John Young Brown, M. D.....St. Louis
Walter B. Dorsett, M. D.....St. Louis
Bransford Lewis, M. D.....St. Louis
Fritz J. Moenninghoff, M. D.....Kansas City

PRELIMINARY PROGRAM.

MEDICAL SECTION.

J. Nelson Barger, M. D. ..... Albany
"Cretinism; With Report of Case."

B. B. Barr, M. D. ..... Clinton
"Diphtheria; With Report of Case."

E. C. Callison, M. D. ..... Kirksville
Subject to be announced.

W. F. Chaffin, M. D. ..... Raymore
"Traumatic Eye Lesions and No Specialist."

James Q. Chambers, M. D. ..... Kansas City
"Acute Pulmonary Edema with Report of Cases."

Scott P. Childs, M. D. ..... Kansas City
"Malarial Infection in Children."

C. O. Dewey, M. D. ..... Breckenridge
"Progress in Medicine and Surgery."

William Engelbach, M. D. ..... St. Louis
Subject to be announced.

T. F. Frazer, M. D. ..... Commerce
Subject to be announced.

Frederick W. Froehling, M. D. ..... Kansas City
Subject to be announced.

A. L. Gray, M. D. ..... St. Joseph
"Etiology and Treatment of Eclampsia."

G. E. Gwinn, M. D. ..... Bethany
"Catarrh of the Middle Ear."

D. L. Harris, M. D. ..... St. Louis
"Two Cases of Cerebrospinal Meningitis Treated by Flexner's Serum."

E. A. Hoefer, M. D. ..... Higginsville
"The Physiology and Management of the Puerperium."

J. Phillip Kanoky, M. D. ..... Kansas City
"Verucæ Plantares et Palmares."

H. S. Major, M. D. ..... Hardin
Subject to be announced.

John W. Marchildon, M. D. ..... St. Louis
"Serum Diagnosis of Syphilis."

J. W. Marsh, M. D. ..... Tipton
"Ectopic Pregnancy."

J. S. Newlon, M. D. ..... Butler
Subject to be announced.

J. B. Norman, M. D. ..... California
"Emergency Surgery in the Country."

W. A. Patterson, M. D. ..... Tipton
"Scientific Therapeutics."

F. J. Tainter, M. D. ..... St. Charles
Subject to be announced.

I. J. Wolf, M. D. ..... Kansas City
Subject to be announced.

EYE, EAR, NOSE AND THROAT SECTION.

D. C. Adcock, M. D. ..... Warrensburg
"Nasal Obstructions as Causative Factor of Disease of Ear and Throat."

C. Barck, M. D. ..... St. Louis
"My Operation for the Extirpation of the Lachrymal Sac."

Robert Barclay, M. D. ..... St. Louis
"Interesting Problems in Ear, Nose and Throat Practice."

Theodore A. Coffelt, M. D. ..... Springfield
"Irido-Cyclitis."

Fayette C. Ewing, M. D. ..... St. Louis
"Our Overstocked Instrument Case; a Plea for Operative Simplicity in Oto-Laryngology."

John C. Faris, M. D. ..... Pemiscott
"Adenoids."

Hal Foster, M. D. ..... Kansas City
"The Prevention of Ear Disease."

Max Goldstein, M. D. ..... St. Louis
"Lantern Demonstration of Anatomy and Pathology of the Accessory Sinuses."

John Green, Jr., M. D. ..... St. Louis
"The Art of Refraction."

W. Emil Klokke ..... St. Louis
"Ocular Examination as an Aid in the Prognosis of Otitis Media Suppurativa."

P. I. Leonard, M. D. ..... St. Joseph
"Ocular and Aural Prophylaxis."

W. H. Minton, M. D. ..... St. Joseph
"Ocular Diseases Due to Systemic Influences."

C. A. Moore, M. D. ..... Springfield
"Reflex Disturbances of Hypertrophied Turbinates."

C. F. Pfingsten, M. D. ..... St. Louis
"Labyrinthian Affections."

Barton Pitts, M. D. ..... St. Joseph
"Ophthalmological Experience."

W. B. Post, M. D. ..... Carthage
"What Medical Legislation Do We Desire?"

Wm. E. Sauer, M. D. ..... St. Louis
"Otitic Sinusphlebitis and Thrombosis. With Report of a Case of Phlebitis and Thrombosis of Lateral Sinus and Jugular Vein."

H. G. Savage, M. D. ..... Warsaw
"Nasal Obstruction: Some of Its Causes, Effects and Treatment."

Flavel B. Tiffany, M. D. ..... Kansas City
"Glaucoma."

Charles Wyche, M. D. ..... St. Louis
"Inspection of School Children with Special Reference to the Ear, Nose and Throat."

Llewellyn Williamson, M. D. ..... St. Louis
"Penetrating Wounds of the Eyeball."

THE MISSOURI SOCIETY OF MEDICAL SECRETARIES.

PROGRAM.

1. The Missouri State Medical Association: What it Should Mean to Missouri Doctors.....By Dr. W. B. Dorsett, St. Louis
2. What it Should Mean to the State at Large, ...By Dr. M. P. Overholser, Harrisonville
3. Scientific Work in County Societies. By Dr. W. T. Elam, St. Joseph
4. The Social Side of the County Organization, ...By Dr. H. S. Majors, Hardin
5. The Secretary's Work from a Business Standpoint, ...By Dr. E. N. Chastain, Butler
6. How to Interest the Eligible Non-Members in County Society Work and How to Get a Good Attendance at the Meetings, ...By Dr. A. H. Thornburg, West Plains
7. The State Journal: What Is Should Mean to the Individual Members.....By Dr. L. W. Dallas, Hunnewell
8. What the County Secretary Can Do to Make the State Journal a More Forceful Element in Medical Organization, ...By Dr. E. J. Goodwin, St. Louis
9. Prosecution of Irregulars: The Experience of a County Secretary.....By Dr. M. A. Smith, Gallatin
10. The Missouri Society of Medical Secretaries: Its Objects and Its Destiny.....By Dr. A. W. McAlester, Jr., Kansas City

COUNTY SOCIETY NOTES

CHARITON COUNTY MEDICAL SOCIETY.

The Chariton County Medical Society convened in regular session in the office of Dr. J. Franklin Welch, at Salisbury, Mo., Thursday evening, March 11th, 1909.

Members present: Drs. J. H. P. Baker, J. F. Welch, T. J. Banning, J. D. McAdam, H. E. Tatum, J. D. Brummall and C. A. Jennings.

The secretary presented the application of Dr. Otis T. Morey, of Salisbury, Mo., for membership. The censors reporting favorably on the application, Dr. Morey was unanimously elected a member of the Society.

Dr. Welch presented an interesting clinic,—a transverse fracture of the patella in a young man. The patient was taken to a St. Louis hospital and operated upon, the fracture adjusted and sutured with kangaroo tendon, and dressed in a plaster cast; the limb remained in the cast for eleven days and on removal union seemed to be good. The limb was then dressed with a posterior splint. Now eight weeks after operation the patient is going around with comfort limping only slightly. The result was pronounced very successful. After all present examining the patient, they thanked Dr. Welch for presenting such an interesting case.

Dr. G. W. Hawkins read a paper entitled, "Modifications Producable With the Local Application of Dry Hot Air in the Treatment of Sprains," and reported several cases successfully treated by this method. The doctor said that when a case presented, he would take pleasure in explaining the apparatus. During the discussion of the paper the other modes of treatment were brought out such as the use of hot or cold water, adhesive strapping, and rest. The paper was very favorably considered and he received thanks from all members present for presenting the same.

Dr. J. D. Brummall promised the Society that Dr. McCormack, of Kentucky, would deliver two lectures at this place, one to the profession and one to the laity, some time in the near future. Society adjourned to meet in Brunswick, Mo., April 8, 2:30 P. M.—C. A. Jennings, M. D., Reporter.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY.

The Gasconade-Maries-Osage County Medical Society met at Bland, March 4th, 1909.

Dr. Frederick Auf der Heide, of Drake, presented a case of astigmatism; the eyes were tested and properly fitting glasses prescribed. Dr. John D. Seba, of Bland, presented a patient aged 30, who was afflicted with endometritis; the case was examined and the uterus swabbed out with ichthyol. Dr. W. R. Ferrell, of Bland, presented a patient, 27 years old, afflicted with sciatic neuritis; the case was examined and treatment advised. Another patient was presented by Dr. Seba, a case of trachoma in a boy aged 13 years. The case was examined by Dr. Short, who explained the pathology and treatment.

The Society then proceeded to elect the following officers for 1909: President, Dr. John Engelbrecht, Stonyhill; vice-president, Dr. M. E. Spurgeon, Red Bird; secretary-treasurer, Dr. John J. Ferrell, Owensville; delegate to the State Medical Society, Dr. M. E. Spurgeon, Red Bird; alternate, Dr. John Engelbrecht, Stonyhill. As member of committee on censors, Dr. J. W. Burgess, Belle.

Dr. W. F. Byler, Koeltztown, gave a talk on hydatid cyst of the uterus. The subject was discussed by Drs. Short, of Versailes; F. H. Mathews, of Liberty; M. E. Spurgeon, of Red Bird; Frederick Auf der Heide, of Drake; J. J. Radmacher, of Meta; J. W. Burgess, of Belle; C. T. Leach, of Fuersville; S. I. Terrill, of Meta; I. M. Owens, of Beaufort. The meeting then adjourned until 8:00 P. M.

The night session was participated in by the public. Dr. M. E. Spurgeon presided, and introduced Rev. H. Miller, of Bland, who in a few well chosen words bid the visiting doctors welcome to Bland. Dr. Frank H. Mathews, of Liberty, then spoke on the dangers of tuberculosis; he laid particular stress on the fact that tuberculosis was a communicable disease and a preventable disease. He then gave plans for the constructions of sanitary rooms. He urged the enactment of an antispitting ordinance for Bland. Dr. John L. Short, of Versailes, spoke on the subject, "The Proper Care of the Eyes of School Children, and the Use and Abuse of Spectacles."

The philosophy of refraction and the use of lenses were discussed in a manner to be understood by the laity.

Dr. I. M. Owens, of Beaufort, then spoke in a humorous vein, along the lines of first aid to the injured. Dr. Frederick Auf der Heide, of Drake, followed with general remarks about the doctor and his work. A recess was taken during which time luncheon was served by the ladies. After recess a resolution was passed recommending to Governor Hadley the name of Dr. Isaiah M. Owens, of Beaufort, as a suitable person to be given a place on the Missouri State Board of Health. The Society will meet again on the first Thursday in June, 1909.—John D. Seba, M. D.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY.

The regular meeting of the Lawrence-Stone County Medical Society was held in the Elks' club rooms at Aurora, Mo., Tuesday, March 3, 1909, with all officers and a large percentage of the members present; and the visitors, Drs. J. E. Tefft, N. F. Terry, Garrett Hogg, D. B. Farnsworth, and C. A. Moore, all of Springfield, and Dr. Darrell, of Republic, made an especially interesting meeting.

The first number of the program was the president's address. This was laden with many good things in general, and suggestions along the line of our president's hobby in particular—"Medical Legislation and Medical Economics."

The paper on "Cervical Lacerations," by Dr. J. B. Baird, of Marionville, was one of special merit. Dr. Baird said in part: "Although during the last few years cervical lacerations have received from medical writers and gynecologists, a permanent place in their studies and writings, I believe that we as general practitioners, can with great profit to ourselves and our patients, review again the subject, which I am confident has not received from us the consideration to which it is justly entitled. I certainly do not believe that to the laceration of the aforesaid

cervix should be charged all the ills to which the human flesh is heir, but I do believe that if we fulfill our duty and become competent diagnosticians of those conditions which are directly or indirectly traceable to this very important lesion, the number of suffering women would be greatly decreased, carloads of drugs would be saved that are now administered for ailments that are wrongly diagnosed, an occasional divorce prevented, and the cases of loathsome uterine cancer would be partly or completely eradicated, insane cases decidedly less numerous, and many would be spared a premature death. Such statements may seem too strong, but in my short and rather limited experience, I have observed closely along these lines, and am satisfied in my own mind that I have not overdrawn the consequences."

Dr. Henson, of Galena, read a very interesting paper on the subject of "Malaria." Dr. Henson having lived on the James river for eighteen years, and having seen malaria in all its phases, his paper was very practical. The majority of the physicians of Lawrence county, treating cases of malaria very seldom, discussed the matter more from a theoretical standpoint. Among the chief etiological factors are, condition of water, freshly up-turned soil and the mosquito. One of the noticeable factors emphasized by Dr. Henson, was the observation that the disease had been very rare in his locality until the moving of large quantities of earth in cuts and fills in the construction of the White River Railroad.

In the discussion of this paper Dr. Fleming advanced the theory that the prevalence of malaria in newly settled localities was due to the hardships and lack of conveniences, and that as a country developed, and houses were screened, in screening against flies, you accidently screened against mosquitoes. Dr. Stevenson, in defense of the mosquito as being the chief factor, mentioned the prevalence of malaria on the prairies of Iowa when new soil was being turned, yet mosquitoes in that locality were practically unknown. The subject closed with valuable suggestions along the line of treatment by Drs. Hoffman, Madry and Loveland.

Dr. Holmes, of Marionville, being absent, his paper on "Postpartum Hemorrhage" will be given at the next meeting.

Dr. D. B. Farnsworth presented a paper, especially appreciated by the general practitioner, on the subject of "Glaucoma," with instructions along the line of early recognition, and emphasized the danger of the general practitioner treating so-called "neuralgia of the eye," without making an accurate diagnosis.

Dr. Garrett Hogg, of Springfield, presented a very able paper on "Diagnosis of Diphtheria." This paper was largely along bacteriologic lines and was discussed by Drs. Darrell, Terry, Andrews and Hoffman and others, the discussion finally branching out into the clinical phases of the disease, and the various antitoxins, all the speakers having noticed the decrease in potency within the past few years, and regretted the commercializing of so valuable a product by supposedly reputable manufacturers.

Dr. Garrett Hogg was made an honorary member of this Society.

After the regular routine of business, the Society adjourned to meet at Aurora, Tuesday, June 6, 1909.—J. B. Fleming, M. D., Secretary.

MARION COUNTY MEDICAL SOCIETY.

The Marion County Medical Society held its regular monthly meeting in Hannibal, March 5, 1909, with a majority of the members in attendance.

A report of a typhoid fever case was made by Dr. J. C. Chilton, in which death was caused by shock due to perforation.

Dr. Sanford, of Palmyra, reported the case of a young lady who was fatally burned. The patient had attempted to move a lighted coal oil stove from a room to the porch. A high wind was blowing at the time, caused the flame to ignite her gown. The patient lived 6½ hours, during which time she suffered excruciating agony.

Dr. Bourn reported a case of triplets, two boys and one girl, their combined weight being 17 pounds. Mother and babies are doing well.

Dr. Bounds reported a case of outward displacement of the tibia in a male. Reduction failed to hold the bone in place; a Hodgen splint with 30 pound weight was applied.

Dr. Raxon reported an interesting case of fracture of both bones of the leg two inches above the ankle. Six weeks after the time of injury, blebs appeared which showed little disposition to heal. The interesting point of this case was the late appearance of the blebs.

Dr. Glahn, of Palmyra, and Dr. Winn, of Hannibal, were requested to prepare papers for the April meeting.—I. E. Hill, M. D., Reporter.

MONITEAU COUNTY MEDICAL SOCIETY.

The Moniteau County Medical Society met in quarterly session at Tipton, Mo., Thursday, March 11, 1909.

Memorial services in honor of the late Dr. J. P. H. Gray, of California, Mo., were held. The following subjects were responded to: "Reminiscences," by Dr. J. B. Stewart, Clarksburg; "Dr. Gray, the Physician," by Dr. N. W. Latham, Latham; "Gray, the Citizen and Public Man," by Dr. J. B. Norman, California.

Dr. Latham reported a case of orchitis, which was very interesting and was discussed by all members present.

The following members were present: Dr. H. W. Latham, Dr. J. B. Marsh, Dr. W. R. Patterson, Dr. J. B. Stewart, Dr. H. C. Freudenberger, Dr. J. B. Norman, Dr. J. M. Robertson and Dr. W. G. Wilson.

The next meeting will be held on the second Thursday in June.—H. C. Freudenberger, M. D., Secretary.

ST. LOUIS MEDICAL SOCIETY.

JOINT MEETING OF THE SURGICAL AND UROLOGICAL SECTION, SATURDAY, FEBRUARY 27TH.

Dr. Louis E. Schmidt, of Chicago, in response to an invitation to address the members of the Surgical and Urological Sections, was the guest of the evening and read a paper on the subject of "Extra-Vesical Symptoms in Connection with Diseases of the Bladder." Following the reading of the paper there was an informal gathering at a smoker, which was attended by a large number of the members of the Society.

MEETING OF THE OPHTHALMIC SECTION, WEDNESDAY, MARCH 3D.

The program of the Ophthalmic Section for this evening was made up as follows:

Demonstration of Patient and Specimens, with the Czapski Binocular Corneal Microscope, by Dr. W. H. Luedde; a Clinical Report,

by Dr. Meyer Wiener; a Clinical Report, with Microscopical Demonstration, by Dr. John Green, Jr.

GENERAL MEETING OF THE SOCIETY, SATURDAY, MARCH 6TH.

Dr. R. M. Funkhouser read a paper on the subject of "Gall Bladder Diseases."

The Society adopted resolutions endorsing the medical bills now before the State Legislature, and transacted other business.

MEETING OF THE INTERNAL MEDICAL SECTION, SATURDAY, MARCH 13TH.

Two papers were on the program for this meeting, one by Dr. W. H. Rush under the title, "A Case of Mild Myxoedema of Long Duration," and another by Dr. L. K. Baldauf, entitled "Suggestive Treatment of Spleno-Medullary Leucemia Based on Animal Experiment."

MEETING OF UROLOGICAL SECTION, TUESDAY, MARCH 16TH.

At this meeting Dr. Henry Jacobson read a paper on "Acute and Chronic Prostatitis."

MEETING OF THE OBSTETRIC SECTION, TUESDAY, MARCH 23D.

The following papers were announced for presentation at this meeting: "The Indications for Abdominal Cesarean Section, a Critical Review," by Dr. Hugo Ehrenfest; "Repair After Labor," by Dr. Davis Forster.

Drs. A. G. Wichmann and H. L. Nietert presented a specimen of a uterus with large submucous fibroid, and Dr. Gellhorn demonstrated specimens of necrotic fibroids.

MEETING OF THE OTO-LARYNGOLOGICAL SECTION, WEDNESDAY, MARCH 31ST.

Dr. Hanau W. Loeb presented a specimen showing bilateral bony occlusion of the posterior nares, and another showing frontal sinus, anterior and posterior ethmoid cells extending over the orbital roof. Dr. Greenfield Sluder presented a patient from whom he had removed a tuberculous epiglottis 15 months previously.

GENERAL MEETING OF THE SOCIETY, SATURDAY, MARCH 20TH.

Dr. D. L. Harris read an interesting paper on the subject of "The Dangers of Laboratory Diagnosis, with Especial Reference to the Use of the City Bacteriological Laboratory by the Medical Profession."

The following were elected members at the last meeting of the Council: Dr. William Thomas Coughlin, Dr. Harry Sandperl, Dr. I. D. Kelley, Jr., Dr. Will Bostick, Dr. O. C. Wenger, Dr. Oscar Engelmann, Dr. Orbun T. Moore, Dr. H. McC. Young, Dr. E. H. Bosse, Dr. Meade E. Hagerty.

SHELBY COUNTY MEDICAL SOCIETY.

The Shelby County Medical Society met in Dr. Vaughn's office at Shelbina, March 17.

Dr. Dallas read a paper on "Abortion" and reported a case occurring during an attack of la grippe. The paper was fully discussed.

Dr. Pollard reported a case of severe hemorrhage from hemorrhoids in a woman recently confined. She also had incipient phthisis. He desired the opinion of others as to whether an operation for

hemorrhoids, under these conditions, was justifiable. Discussed by all present.

Dr. Wood reported a case of obscure stomach trouble in which the only symptom was a burning sensation in the stomach and esophagus without reference to time or meals.—A. M. Wood, M. D., Reporter.

WEBSTER COUNTY MEDICAL SOCIETY.

The Webster County Medical Society held its regular meeting at Fordland, March 17th. This was the yearly business meeting in which the fees and other questions of the business side of our profession were discussed and measures suggested for protecting the business interests of the physician.

A number of clinical cases were reported and discussed. Resolutions were adopted requesting our representative and senator in the State Legislature to support the bills that have the approval of the legislative committee of the State Association.

The applications of Drs. Jno. W. Good and S. O. H. Williams, Fordland, were received, and they were duly elected to membership.

Our next meeting will be held at Marshfield in June. This will be an open meeting and the public will be invited to attend and take part in the discussion of questions touching the welfare of the people.—W. R. Beatie, M. D., Secretary.

BOOK REVIEWS

New and Non-Official Remedies. Articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association, prior to January, 1909. Chicago: Press of the American Medical Association, 103 Dearborn avenue. Paper, 25c; cloth, 50c.

This is the first regular edition of the Annual New and Non-Official Remedies, and it contains a list of the remedial preparations approved by the Council on Pharmacy and Chemistry of the American Medical Association. Instead of adhering strictly to an alphabetic arrangement, a classification has been adopted which permits an easy comparison of remedies of similar origin and properties. Mixtures are to be found in the appendix and a number of non-proprietary preparations have been added which, for various reasons, have not been admitted to the Pharmacopeia. The descriptions in the appendix have been made as brief as possible and the articles are classified under the names of the manufacturers. Therapeutic indications are not given, as it is assumed that the physician is able to apply his knowledge of the pharmacologic properties of the ingredients without aid from either the Council or the manufacturer. The non-proprietary remedies admitted to the body of the book are described as accurately and carefully as a painstaking search of the literature would permit.

The descriptions of processes of preparations, chemical and physical, and of the physiologic action, contain much information which cannot fail to be of immense value both to physicians and to pharmacists.

Over 200 different remedies are described, and after mastering the Pharmacopeia the practitioner and the student should become thoroughly familiar with this presentation of the newer materia medica.

A Manual of the Diseases of the Nose and Throat. By Cornelius Godfrey Coakley, A. M., M. D. Fourth Edition, Revised and Enlarged. Lea & Febiger, New York and Philadelphia.

This volume, with its 126 engravings and seven colored plates, with over 600 pages, well arranged and substantially bound, presents to its readers a fund of accurate, concise and classified information, thoroughly up-to-date, upon the diseases of the nose and throat, unequaled by any other volume of like size and scope.

The description of the submucus resection of the septum alone is worth the price of the book. The chapter devoted to "Therapeutic Formulæ," contains much that is valuable to the busy doctor.

This little volume supplies the wants of both the specialist and general practitioner, and should be in the library of every up-to-date physician. T. A. C.

Golden Rules for Dietetics. The General Principles and Empiric Knowledge of Human Nutrition; Analytic Tables of Foodstuffs; Diet Lists and Rules for Infant Feeding and for Feeding in Various

Diseases. By A. L. Benedict, A. M., M. D. Member of American Academy of Medicine, and of American Gastroenterological Association, etc. Author of Practical Dietetics. C. V. Mosby Medical Book Publishing Company, St. Louis, 1908.

This book is a splendid guide for those interested in dietetics. The chapter on "Methods of Cooking" alone is worth the price of the book. The author shows a thorough knowledge of the physiologic chemistry of the body and its requirements for health, strength and longevity.

J. R. B.

SURGERY. John Allen Wyeth, M. D., LLS., ex-President of the American Medical Association, etc., Marion Sims Wyeth Publishing Company, New York City.

The original Wyeth Text Book on Surgery was published twenty-seven years ago, and was followed by two subsequent additions. These books have been standards, and were used throughout the country as text books and works of reference. There has been some changes in the new work which is before us at present, although many of the original illustrations and a goodly portion of the text remains the same. The author's extensive acquaintance and wide reputation will insure a large use of this, his latest book. We do not think this book is much of an improvement over the last edition, which appeared in 1900. This, however, is not saying anything against the book as the former edition ranks high among the one volume text books on surgery, it being only necessary to bring it up to date.

PROGRESSIVE MEDICINE, Vol. XI., No. 1, March, 1909. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Lea & Febriger, Publishers, Philadelphia and New York. Subscription price, $6.00 per annum.

The March number of Progressive Medicine contains 277 pages devoted to the following subjects: "Surgery of the Head, Neck and Thorax," by Charles H. Frazier, M. D.; "Infectious Diseases, Including Acute Rheumatism, Influenza and Croupous Pneumonia," by Robert B. Preble, M. D.; "The Diseases of Children," by Floyd M. Crandall, M. D.; "Rhinology and Laryngology," by D. Braden Kyle, M. D.; "Otology," by Arthur B. Duel, M. D.

The simple announcement of the appearance of articles by authors of the reputation of the above-named contributors is sufficient to create a desire to read what these men have to say upon the subjects treated of. All the articles are prepared especially for Progressive Medicine and are not published elsewhere, hence every number of this excellent periodical is of the highest value to the practitioner who desires to learn the views entertained by men of eminence concerning present day methods of treatment.

JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume V MAY, 1909. Number 11

ORIGINAL ARTICLES

OTITIS MEDIA.*

By T. A. Coffelt, M. D., Springfield, Mo.

No organ of the body is more complicated in its anatomical structure and physiological phenomena, nor more difficult to understand, than the ear in its middle and inner divisions. The situation of the middle ear, and its relation to surrounding parts, bears very great importance to the diseases and inflammations of that organ. Under the term middle ear, are included the tympanic cavity and its two very important adjuncts, the Eustachian tube in front and the mastoid process, with its cells, behind. A clear understanding of its anatomical structure and their relations is absolutely essential for successful diagnosis and treatment of middle ear inflammations. This part of the subject I deem unnecessary to discuss in this paper.

By the term otitis media, in the generally accepted sense, is meant inflammations confined to the tympanic cavity. I shall include the mastoid cells to some extent in connection with the drum cavity in this paper, from the fact that so often in the diseases of the tympanic cavity, the Eustachian tube and the mastoid process, in a greater or less sense, share in the morbid process. Deafness, deafmutism, disturbances of equilibrium and brain abscess often take their origin in some of the diseases of the middle ear.

It is said to be proven by statistics that one person out of every three has ear disease in one or both ears, and sixty per cent. of all ear diseases are of the middle ear.

*Read before the Lawrence-Stone County Medical Society, March 3, 1909.

Authorities divide otitis media, according to the clinical phenomena, into four classes, but I find it often very difficult to distinguish between them in some of their forms. They are divided into acute and chronic catarrhal otitis media, and acute and chronic purulent otitis media.

I shall confine my remarks to the acute forms of the inflammation; those forms most frequently seen first by the general practitioner rather than the specialist.

The difference in the etiology in these two, according to most authorities, seems to be only in point of virulence. The factors which determine whether an acute otitis media will be catarrhal or purulent, are based, first, on the power of constitutional resistance, or the blood state of the patient; secondly, on the local or exciting cause, including microörganisms.

In the acute catarrhal otitis media the mucous membrane is congested and swollen, with more or less exfoliation of the epithelium and excessive secretion of serum and mucus. These changes may be confined exclusively to the mucous membrane of the tympanic cavity, or they may extend to the antrum and mastoid cells. The drum cavity may be filled with this seroexudate.

Among the causes of catarrhal otitis media may be mentioned sudden atmospheric changes, influenza, improper diet, impaired elimination by the skin, imperfect ventilation of the Eustachian tube, infectious diseases, pathogenic organisms of diminished virulence, adenoids and nasal diseases.

The symptoms of acute catarrhal otitis media are as follows: The patient complains of some pain in the ear, though not always, and not so severe as in the purulent form and a sense of fullness in the ear. There is more or less impairment of the hearing, depending somewhat on the condition of the weather, and sometimes on the position of the patient. On moving the head there is, sometimes, a sensation as if there were a rolling body in the ear. Tinnitis is sometimes present, and often a blowing sound with each pulsation. If the tympanic cavity is partly filled with exudate, the upper limit may be distinctly seen through the membrani as a clear-cut, slender, black line. After inflation of the drum cavity, air bubbles in the exudate, behind the membrane, present the appearance of round pearls. The color of the drum head is yellow below the line of exudate and gray above. In the early stage of the inflammation the membrani are more or less red and congested, and sometimes appear considerably swollen.

The short process is more prominent than usual, and the manubrium is fore shortened. The cone of light is shorter or may be divided. During inflation, crepitant rales may be heard by the patient. After inflation the drum head usually regains its normal position and color.

If the hearing is markedly improved upon inflation the prognosis is favorable. If it is not improved and there is shortening of the time of

bone conduction, with obstinate occlusion of the Eustachian tube, the prognosis is unfavorable.

Recovery occurs in from a few days to several months. If continued long it may assume the chronic form of otitis media. Acute catarrhal otitis media, instead of undergoing resolution, may pass into the acute purulent form by the passage of pathogenic germs from the nasopharynx.

Bacteriologists recently assert that more than a dozen different kind of pathogenic germs may excite acute purulent otitis media, chief among which are the pneumococcus of Fraenkel, the streptococci and the staphylococci. The others only occur occasionally.

Generally, the local and constitutional causes of acute purulent otitis media, aside from the pathogenic germs, are la grippe, diphtheria of the respiratory tract, the exanthemata, tuberculosis, acute Bright's disease, and traumatism.

In acute otitis media the pain becomes more and more intense, deafness more profound, and the tinnitis louder and more distressing. Usually fever comes on, if not already present from other causes. The drum membrane is red and congested. Its features are lost in the general swelling of its surface.

As the inflammatory process advances, the membrane will be seen to bulge, usually in its posterior half, sometimes in its superior section, and the membrani flaccid. The pain increases, often until it becomes very intense, causing an agony in adults and sometimes convulsions in young children. This pain in infants may be recognized from the pain in colic by the fact that the former is constant while the latter is spasmodic.

If the pain continues severe over six or eight hours in children, and twelve or fifteen hours in adults without spontaneous rupture of the drum membrane, paracentesis should be performed, as the hearing and even life itself, is at stake in many instances, if the drum membrane is not opened in some way. The longer perforation is deferred the less likely it is to occur spontaneously, and unless the pent-up secretions are evacuated by paracentesis, they are inclined to burrow toward the mininges, sinuses and brain cavity.

There are cases where the pus and secretions escape through the Eustachian tube. This is, perhaps, more frequently the case in infants, from the fact that the tube is not so long and is larger in caliber than in adults.

The pent-up matter, by pressure on the fenestra, and thence on the contents of the inner ear, sometimes produces convulsions in young children. It sometimes happens, before suppuration ensues in the tympanic cavity, that the inflammation extends from the drum to the membranes of the brain by way of the petrosquamous suture, through which a fold of the dura mater dips into the tympanic cavity and unites with the mucoperiosteal lining of the latter. This fissure, in some

cases, is said to be wide, and the fold of dura mater, entering the cavity, large in infancy.

In any case of middle ear inflammation threatening the life of the patient, the demand for the prompt recognition of the gravity of the case, together with proper efforts to relieve the sufferer, are absolutely imperative. Too little importance has been attached to middle ear inflammations, even among physicians. At least, hearing is greatly impaired, and often lost, with life endangered, and sometimes sacrificed through this indifference. In regard to earaches and suppurating ears, you often hear such remarks as: "Oh, it's only an earache;" "It's of no consequence;" "No danger to the child's life;" when, indeed, there is an inflammatory process, that will surely result in serious impairment of the hearing, and may result in so grave a consequence as the loss of life. Parents should be promptly informed of the gravity and dangers arising from middle ear inflammations.

In the treatment of otitis media, if seen in its early stages, before the exudate is large or suppuration has occurred, our efforts should be directed to abort the process if possible.

After locating the cause, remove it if it can be done. If due to adenoids, remove them. The general systemic condition should receive attention, as well as regulation of diet and hygienic surroundings. When due to catarrh of the naso-pharynx, it should be properly cleansed, and kept in as aseptic condition as possible. This cleansing of the nose and naso-pharynx is especially necessary if the ear trouble is due to influenza or the exanthemata.

Watery sprays and especially douches, should be used with gentleness and care in acute catarrhal otitis media. In the early stages, inflation of the tympanic cavity should be avoided, lest pathogenic germs be forced into the cavity, and a purulent otitis result. The temporary closure of the Eustachian tube in these cases is nature's method of preventing the passage of pathogenic germs into the drum cavity.

Where the exudate remains and the closure of the Eustachian tube persists, it is proper to inflate, using a medicated vapor from a nebulizer, after thoroughly cleansing the naso-pharynx and nasal passages. For the pain at the beginning of an acute otitis media, a few drops of carbo-glycerole, a ten per cent. solution, as warm as can be borne, will arrest it and assist in aborting the attack in many cases. Dry hot vapor applied to the drum membrane through the external auditory canal, or douching ear with hot water by means of the fountain syringe, while the drum head is still intact, often relieves the pain and helps to bring about resolution. The practice of removing the exudate or pus by passing the Eustachian catheter through the nose and producing suction at the mouth of the tube, acts well in relieving pain and helping to bring the inflammation to an end. This is a very difficult procedure in infants and young children.

If the pain continues severe more than eight or ten hours in children and fifteen or twenty in adults with bulging of the drum head, it should be promptly incised. Perfect cleansing of the external auditory canal should be secured before incising the drum. The discharge may not contain pus thus early and the effort should be to prevent infection from pathogenic germs. Under these conditions inflation should be strictly avoided.

After the drum head has been incised or ruptured spontaneously, to secure and maintain asepsis and thorough drainage is the great desideratum, and should be the rationale of all subsequent treatment. Mopping out the discharge from the external auditory canal with dry sterile cotton will be sufficient to cleanse in the majority of cases. Peroxide of hydrogen should not be used in cleansing the ear in acute inflammations of the drum cavity, if there is a perforated drum head. I find a very excellent cleansing and disinfecting application in Enzymol prepared by Fairchild Brothers and Foster. Diluted with water, it can be applied on a cotton mop. It seems to liquify and digest the pus cells and dried secretions without effervescence, as seen in peroxide of hydrogen; hence, by its action it does not force germs in to the atic or mastoid cells.

After cleansing the canal, it should be gently dried with sterile cotton on applicator. I have found good results from the use of a powder composed of boracic acid four parts and aristol one part, used by insufflation, applying just sufficient powder to form an even light coating over the exposed inflamed tissues. After cleansing the external auditory canal, strips of sterilized gauze should be inserted in it down to the drum membrane, so that all discharge may be drawn out as fast as formed. These strips should not be packed too tightly, and may remain twenty-four hours, unless the discharge is very profuse. Over this a light dressing of gauze may be placed, and if it becomes damp or wet from the discharge, it may be changed as often as necessary.

Almost all cases will require systemic treatment. In the early stages of an otitis, the bowels should be unloaded by a quick saline cathartic, or a few doses of calomel followed with salts. These measures will aid resolution or help to abort the process if not too far advanced. Farther on a tonic will assist resolution or the healing process. Syrup of the iodide of iron for children combined with the phosphites, may be used with good results in the majority of cases.

Under this simple treatment, I have yet to see the first case of mastoid inflammation resulting from acute otitis media. In the process of an acute attack of otitis media, should the mastoid cells become involved, the mastoid process become swollen and tender, if the drum membrane has not already been ruptured or incised, a free incision through it should be made at once.

Patient should be kept in bed, and ice compresses placed over the mastoid process and around the ear. Calomel in small doses often re-

peated may be given, and every effort should be made to prevent further infection. It is sometimes difficult to determine whether the mastoid cells are involved or not.

There are three diagnostic signs that point to mastoid involvement when found present at the same time. These are fever, pain, usually over the mastoid process, and prolapse of the upper posterior wall of the auditory canal near the membrani tympani. Tenderness is usually present, but not always, and at the early stages of the attack is found high up in the front part of the mastoid region close behind the auricle, and over the region of the antrum. Later on there will be tenderness on pressure over the point of the mastoid process.

When the fact is ascertained that there is a mastoid empyema, the case should at once be treated surgically, and the antrum opened. Even at this time the mastoid skin may not show signs of swelling, and there may not be present tenderness over the region of the process; yet the continued pain, the prolapse of the upper posterior wall of the canal, and the presence of fever are indications of mastoid empyema, and delay in opening the antrum must not continue, with empyema of the mastoid so near the cranial cavity. It is true that sometimes spontaneous rupture of the outer bony wall of the mastoid occurs, but owing to the probability that the escape of pus is almost as likely to take place through the inner as the outer wall, the delay in evacuating the antrum is dangerous to the life of the patient.

I do not purpose giving a description and the technique of this operation at this time, but emphasize the fact that the operation should not be undertaken without a thorough knowledge of the anatomy and relation of the parts, especially of the sinuses and cranial cavity. Besides having a thorough knowledge of the anatomy and the relations of the parts and familiarity with the technique of the operation, the surgeon should have at least some skill in knowing how to perform this delicate and often dangerous operation.

In conclusion, almost all cases of acute otitis media, if recognized in time and proper treatment given, will recover without impairment of hearing. On the other hand, a large per cent., if not all loss or impairment of hearing, following acute otitis media, has resulted from neglect or improper treatment.

Mastoiditis will rarely, if ever, occur as a result of an acute otitis media, if the aural inflammation be recognized and proper treatment applied.

The laity should be taught that there is as much danger in a neglected or improperly treated middle ear inflammation as in an inflamed appendix.

PNEUMONIA, ITS CAUSES AND TREATMENT.*

By John S. Newlon, M. D., Butler, Mo.

In writing upon the important subject of pneumonia, from the standpoint of its familiarity, I can only say what all have said. But be this as it may, when passing over the bare and smoothly beaten pathways of medicine, we should congratulate ourselves upon the wonderful advancement of medical science, which enables us to discuss this disease with intelligence and with a thorough knowledge as to its clinical and various manifestations.

Our modern knowledge of pneumonia dates from the end of the seventeenth and the beginning of the eighteenth centuries. From that time many scientific investigations have been made by the ablest pathologists, microscopists and clinicians, whose masterly descriptions of the physical signs and morbid anatomy have apparently left very little to add or modify. Yet, we, as the twentieth century physicians, standing upon the threshold of a new century, must ever be on the alert for new ideas, new theories, and new investigations, which is our duty, and which aids materially in advancing the lofty standard of the medical profession.

The subject of pneumonia is indeed too broad for me to relate here its interesting history, in all its phases and clinical manifestations, hence, I will epitomize my remarks and plunge into its causes and treatment.

It may be well, however, to mention briefly its infectious nature, and the classification of its various stages. Lobar pneumonia, croupous or fribinous pneumonia or pneumonitis, commonly known to the laity as lung fever, is an infectious disease characterized by inflammation of the lungs, toxemia of varing intensity, and a fever that usually terminates by crisis.

The classification of its stages are four in number, namely: 1st, stage of congestion; 2d, stage of red hepatization; 3d, stage of gray hepatization; 4th, stage of resolution. All these stages, in their peculiar behavior, may terminate in the stage of resolution from the third to the eleventh day, or possibly longer, always terminating, however, on the odd numeral day.

As I have already stated, pneumonia is an infectious disease, hence, its true etiology originates from the germ family, as do all other infectious diseases. But there are many other factors to be considered in connection with its true etiology. The predisposing causes which are so manifold and so multitudinous, glide hand in hand with the existing and active specific microörganisms, the principal ones of which I will enumerate.

*Read before the Bates County Medical Society, Butler, Mo., October 29, 1908.

Pneumonia is no respector of age or person. It has been met with in the new born. Up to the sixth year the predispotion is very marked; it diminishes to the fifteenth year, then increases for each subsequent decade. The statistics show, however, the death rate much greater in the aged than in the young adult, and males are more frequently affected than females.

In the United States the negro seems to be more susceptible to the disease than the white, and the mortality is much greater, which is due, to my mind, to their non-hygienic environments and their natural habits of delinquency in comforting their homes, and protecting themselves from exposure during the winter and spring months, which is the most fruitful predisposing factor in the etiology of this disease.

In the cities the disease is much more common than in the rural districts. Individuals who are much exposed to hardships and the cold, changeable weather, are particularly liable to the onset of this infection. Newcomers and immigrants, however, are stated to be less susceptible than native inhabitants.

Its mode of onset is noted for its extreme peculiarity in attacking the most healthy individual. When at last a man has reached the meridian of life, and is on the very verge of realizing the rewards of his past labors, when health was never more vigorous, nor form more robust, nor prospects of a long life more promising, he may become the victim of this terrible disease, and sometimes be overtaken by its fatal results.

The personal condition, such as debilitating causes of all sorts, renders individuals more susceptible. Alcoholism is perhaps the most potent predisposing factor. During my college training, post-mortem demonstrations were a very interesting study in connection with the regular curriculum, and many times we were called upon to hold autopsies, a number of which presented to us a history of acute or chronic alcoholism, the cause of death remaining unknown. In exploring carefully the abdominal viscera, no pathological condition could be detected with the exception of a slightly sclerotic liver or occasionally an acute nephritis. The stomach in nearly all cases would be empty and its lining somewhat corrugated and congested, and one or two cases presenting an arterio-sclerosis of the gastric artery, all of which indicated the condition of a typical alcoholic. Now, in exploring the contents of the chest cavity, we found our suspicions verified, for in making a cross section of the lung, pneumonia in the second stage was revealed, and an ante-mortum clot found, extending from the right ventrical high up into the pulmonary artery. All of these cases I refer to, died suddenly and were usually found dead in their rooms at the waking hour in the morning, murder or suicide being suspected. Peculiar as it may seem that such fatal and rapid results may follow an infectious disease, nevertheless, from my own experience and observation, I am willing to classify alcoholism, in connection with exposure to cold, as the most fatal and most fruitful predisposing element in the etiology of this disease.

Traumatism or contusion, particularly of the chest wall, without necessarily any lesion of the lung, may result in acute lobar pneumonia. And workers in certain phosphate factories where they breathe a dusty atmosphere, are very prone to the infection.

Climate seems to have no influence on this disease as it prevails equally in hot and cold countries. Much more important is the influence of the seasons. The statistics show the largest percentage of cases during the months of February and March when the weather is cold and changeable, which is regarded simply as a factor in lowering the resistance of the bronchial and pulmonary tissues to the bacterial invasion.

We also meet pneumonia following some other disease which has confined the individual to his bed for some time, exhausting his strength and lowering his vitality, which in such cases may be due to various forms of infection. This forms a distinct disease, however, from acute lobar pneumonia and presents a different condition as to its pathology and treatment.

One or more attacks leave not the slightest degree of immunity. Perhaps no other disease recurs so frequently in the same individual. Instances are on record where individuals have had ten or more attacks.

From the bacteriological viewpoint of this disease we are indebted to discoveries of Sternberg, Pasteur, Fraenkle and others, whose scientific procedures and investigations demonstrated and isolated the micrococcus lanceolatus, or diplococcus pneumoniae of Fraenkle, to be the specific microörganism in the etiology of genuine acute lobar pneumonia.

The organism is a somewhat elliptical, lance-shaped coccus usually occurring in pairs, hence the term diplococcus. It is readily demonstrated in cover glass preparations, with the usual dyes, and by Gram's method.

I need not mention the various organisms that are found in connection with the pneumococcus as it goes without saying that there are many, but the principal one is the streptococcus pyogenes aureus, and the kinship of these two germs is very close; they can, however, be easily differentiated by the rules and methods of bacteriology.

Under other conditions it is a very important point to remember that the pneumococcus occurs in the mouth and bronchial secretions of healthy individuals, about 20 per cent., according to Netter's observations. It also occurs in the non-virulent state and may be regarded as a regular inhabitant of the mouth and pharynx.

It is an interesting fact that the most fertile field for the pneumococcus is in the mucus secretion of the lungs from the bronchial tubes to the ultimate alveoli, and at this time if the opsonic index is below normal, which renders nature impotent from overcoming the toxic products of the germ, the consequent result is pneumonia in its true form.

The pneumococcus possesses other characteristic phenomena by thriving in structures of the body other than the lungs, when a

way is open for its invasion, thereby producing all the symptoms of inflammation, often described as distinct diseases, yet due to the same specific cause.

Clinically, the infectious nature of pneumonia was recognized long before our knowledge of the pneumococcus. Among the features which favored our attitude in this belief was its similarity to other infections in its mode of onset, and its habit of occurring in epidemic form, localized in certain houses, in barracks, jails and schools. Also the clinical course of the disease is that of an acute infection running a definite cycle in a way seen only in infectious disorders.

The constitutional symptoms may bear no proportion whatever to the severity of the local lesion. As is well known, a patient may have a very small apex pneumonia, which does not seriously impair the breathing capacity, but which may be accompanied with the most intense and extreme toxic symptoms.

Now, leaving the etiology of this disease and the predisposing causes which I have described, with the specific microörganism, we will discuss the treatment, which is the most important element for the consideration of the skilful physician when dealing with this infection.

There is no specific treatment for pneumonia. Perhaps there is no other disease more varied in this respect.

So rapid and insidious is its mode of onset, that the physician is not called until after the first or second chill, and the lungs are in an extreme degree of congestion. Here he must be a constant watcher and a therapeutist only when treatment is actually needed.

In the general management of a case we must use the same careful hygienic precautions as followed in the most malignant infectious disease. The first thing to do is to see that the patient is put quietly to bed. The bed preferably is a high single bed, fitted with springs and an ordinary mattress. All bedding must be cleaned and changed daily. A southeast or a southwest room must be used if possible, which allows the patient all the liberty of the glorious, and harmonious beams of sunshine, which is always essential and demanded by nature when she is unfortunately stricken and calling for help.

The room must be well ventilated day and night; this is essential to enable the patient to inhale all the pure oxygen possible at every inspiration, as in some cases the breathing capacity is so limited that it makes it almost impossible at times for the patient to receive enough oxygen. Only one or two persons must be allowed in the room at the same time.

The diet should consist of plain water or lemonade given freely. When the patient is delirious the water should be given at fixed intervals. The food should be chiefly liquid, consisting of milk with some of the cereals and eggs, soft boiled or raw. A cup of weak tea may be given with a toasted cracker or a slice of bread. To my mind it is well to add broth to the diet, such as beef or chicken broth, or broths of wild

game which contain fat and proteids, which aid materially in maintaining the strength and vitality of the patient. It is well, however, to flavor the broths with other things than the meats from which they are cooked or made, such as carrots, celery, turnip, parsnip, etc., whichever may best suit the patient's desire.

A synopsis of the treatment of pneumonia usually is: to combat the fever if it becomes excessive; to support the heart if it becomes feeble or engorged; maintain renal activity, and regulate the peristalsis of the bowels. In the treatment of the fever we should remember that it is not regarded as a dangerous symptom unless it rises above 103° F. and remains at this point for some time, for in a febrile disease running a short course, fever is not only helpful but there is reason to believe that when present in a moderate degree it is actually beneficial. If the fever does rise above 103° F., however, it should be reduced by sponging with cold or tepid water, active friction being used at the same time. There is absolutely no danger of the patient "taking cold," although this is generally doubted by the laity. If the heart's action is somewhat boisterous and agitated, with a fear of pericarditis, it is well to apply an ice bag to the cardiac area.

The most essential element is supporting the heart and circulation. For the laboring heart, with almost empty arteries, no drug compares with digitalis, but before it is employed we must be sure that it is actually needed. A feeble apex beat, a feeble second sound at the right second costal cartilage, and an accentuated second pulmonic sound at the second left costal cartilage, will reveal the fact that actual stimulation is needed.

As long as the second pulmonic sound can be heard we know that the heart is performing its function, the accentuation indicating pulmonary congestion and a tendency to a failure of the right side of the heart from its extreme efforts in trying to pump the blood through the congested lung. If the skin is moist and the vascular system relaxed, belladonna should be combined with the digitalis in doses according to the severity of the case; strychnine may be used in some cases at regular intervals. In the earliest stages of the disease, if the patient be seized with a chill followed by fever and a bounding, angry pulse with marked nervous excitement, it is well to resort to venesection, bleeding to the extent of a pint, if it be a healthy, robust individual; or, instead of this, we can employ veratrum veride, or aconite, to relax the systemic blood vessels, and, as it were, "bleed him into his own vessels," thus making it easier for the blood to pass into the arterial system than into the congested lung. A hot foot-bath at this time will also tend to relieve thoracic congestion; whiskey is a good stimulant to the heart, or gin may be given for the same effect, and at the same time aid in maintaining renal activity.

If violent pain in the chest is present it is best relieved by small doses of morphine, or hot poultices may be applied if it be a child, but the ice is better if it be an adult. A cotton or flannel jacket should be made to

fit the chest closely, both anteriorly and posteriorly, and made to open and close either in front or on the side by means of laces so it can be easily removed for the physician to make his examinations without disturbing the patient. In combating the toxins we must remember that nature's three greatest avenues of elimination are the skin, kidneys and bowels; therefore, it is an essential requirement for these important functions to be actively and constantly stimulated.

At the present time we have no specific product from the bacteriological laboratory which will safely and surely neutralize the toxins of this disease; thus, we must be content with the measures we now possess to promote the elimination of the poisons, by the tepid or cold bath, to stimulate the skin and vasomotor centers, an abundance of water to promote the flow of urine, and the saline laxatives for the bowels.

CAPITAL PUNISHMENT A TRAIT OF BARBARISM.*

By T. F. Lockwood, M. D., of Butler, Mo.

This title may seem foreign or non-medical, but after having heard the subject, I believe you will agree with me that it is a matter of much concern to the medical profession.

Over a half century ago philanthropists sought to revolutionize the national tenor pertaining to capital punishment, but found so much opposition to their efforts at this sort of reformation that all projects were practically abandoned. There were a few, however, prompted by a sense of Christian duty, who occasionally proclaimed their opinions, regardless of public sentiment, regarding the death penalty for crimes committed, but their claims were not sufficiently founded at that age of criminal epoch to form an injunction against state and national action in the matter. But the time is over-matured when this trait of paganism should be forever abolished and the pure principles of Christian government be asserted. The Scripture says: "But I say unto you, love your enemies, bless them that curse you, do good to them that hate you, and pray for them that despitefully use you and persecute you." And again: "Therefore, all things whatsoever you would that men should do to you, do ye even so to them; for this is the law and the prophet." These precepts coming from the great Ruler of the Universe, are strictly incompatible with the act of putting to death a helpless prisoner in the hands of the law, who should be, to all right-minded, sympathetic men, an object of compassion, not of any vindictive feeling.

This gigantic question remains to be decided; whether it shall be placed wholly in the hands of Christian advocators for settlement, or should it not be settled by the medical fraternity, not waiting for it to become a political issue to be dealt with by the professional politicians of our country. Realizing that the medical profession is composed of some of the most brilliant intellects the world has ever produced,—ever on the alert to aid humanity in the most dire calamity, always striving to uplift the State and nation to a higher plain of moral aptitude—I am proud of the privilege to present the sentiments embodied in my humble essay before this assembly of human benefactors.

Physicians are in a great measure life-preservers and life prolongers, confined to no set rule for doing either; therefore, I deem it harmonious and in strict keeping with everything pertaining to a paradoxical profession, and do not believe we are over-reaching the bounds

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of medical science, when we indulge in such timely digressions. We are free-writing and free-speaking American citizens, not barred from offering our protest against this heathenish method of dealing with criminals in our State,—as well as many other matters of much importance which concern the interest and well-being of our fellowman.

In the world's history of the past, different governments of the various countries have tried the influence of every form of corporeal punishment that a resourceful people could devise and execute. Imprisonment, tread-mills, whipping posts, branding, exiling, electrocuting, hanging and beheading, all have been tried and under each of them, the sum total of crime in proportion to the number of population included in the estimate the number of executions on the gallows, is indeed appalling. I sincerely believe such legal procedures contrary to the laws of God and, hence, a moral menace to the betterment of our State and nation; therefore, I appeal to you as right-thinking men to answer for me this important question: Who is it that is punished most severely? Is it the person condemned, bound and led to the gallows, like a lamb to the slaughter? or is it the loving wife, dear old mother, father, sister or brother? or the affectionate children of such an unfortunate victim? The death penalty inflicted is but a short punishment to the condemned, lasting only from the time sentence is passed on him till the execution takes place, when all pain and punishment in this life is ended. But think, if you will, of a kind, innocent, broken-hearted mother, who loves her son as only a fond mother can love, having to bow submissively to a statutory law established by our own enlightened people that takes from her, her own flesh and blood, her own dear boy, dearer to her than all the earth, no matter how miscreant or incorrigible he is or may have been, and hang him by the neck that her loving arms have so many times entwined, till he is thrice counted dead by a legalized physician.

It pains my very soul to contemplate the awfulness of the sentence which I am about to recite. Picture in your merciful minds a little innocent child, incapable with its childish mind to understand the meaning of the law which to it is but a sort of revengefulness for some trifling offense committed, merely a cruel deed of very bad men, when told that papa is to be taken out on a certain day by men whom he has never harmed, and killed. No human power on earth, and I question if the power of God in heaven, can console a child thus rendered fatherless by the enforcement of a said-to-be just law of a civilized land. If we were to throw aside the black-cap from the head of a hanging man and permitted to witness the sickening, spasmodic contortions of the blackened face as he struggles in giving up his life, we would not be so willing to become a party to the killing, by standing beneath the scaffold to count the flickering pulse of him who yielded his life, not to restore the one he may have taken; not to atone for crimes he may have committed; not as a self-sacrifice that the world may become better or that his grieved and bereaved family might be freed of the stigma he

may have placed upon it; but he was murdered at the hands of an ignominious law enacted and executed by those that know not what they do, and too, in a land where Christian religion is extensively taught and practiced. One human being should never destroy the life of another except as a positive necessity. If an individual, for example, is assailed by an enemy with an intent to commit murder, and he is unable to prevent the consummation of the deed, except by destroying the purposed destroyer, he is fully justified in killing the offender under such grave circumstances. But, after a murderer or proposed murderer has been arrested and disarmed, then to take his life, would be committing murder because the act would be shedding blood, premeditatingly, of a human being who is then harmless, whose existence, therefore, is no longer a public nuisance or source of danger to any one whether public or private. This degree of murder would not be so aggravated as the one committed unprovoked, however, but it would be an actual departure from the principles of moral rectitude and as gross an infringement of a moral law as the former. If it is necessary to take the life of a felon in order to subdue him, I believe it justifiable and not homicidal. It is far better to sacrifice the life of a felon or madman who is now a public nuisance than to allow him to take the life of a valuable, law-abiding citizen, for one or the other's life is at stake and the hazard, therefore, is the outcome of his own evil propensities, and the loss ought, in justice, fall on the guilty and not the innocent.

You who have witnessed the hanging of a human being, when the death-cap was drawn over the pitiable face to shut out the light of day forever and to hide from view the facial expressions of a painful death, and while the attendants on the scaffold were bidding farewell to the doomed one, did you not experience a sick sensation deep down in your heart, despite the legal authority prompting the act, that all was not right, that a sorrowful mistake was possibly being made in taking human life, which is contrary to all principles and precepts taught in the book of righteousness? I am persuaded to believe that the death-like stillness and the faint feeling at heart that pervades one's soul on an occasion like this, is but a sensation emblematic and in miniature, of course, of that awful gloom experienced on the eventful day of Christ's crucifixion. After witnessing an execution, have you not taken notice of that unsatisfied feeling lingering about your conscience, a feeling that a life has been forcibly taken, giving nothing in return, not even consolation to the bereaved of the victim of the crime for which the execution was performed? Killing a murderer does not restore the life or lives destroyed by him; it does not prevent crime, for there is just as much murdering done in a state that enforces capital punishment as in the one that commutes all death sentences to life imprisonment. The hard-hearted professional criminal becomes fearless of death, so debauched and so diseased is his brain that death, many times, is welcomed by him; so to kill him is no punishment at all as the thought of death to him is but a

soothing solace to his disturbed and perverted mind, possibly favoring him greatly by putting him out of the way, for had he an opportunity he probably would have ended his own life. Seeing, then, that the punishment inflicted upon the condemned is minimized, and that the great burden of the execution falls on the helpless and innocent where it rests with such weight, morally and socially, as to keep them painfully oppressed throughout their earthly existence, we should, for the sake of mother, father, wife and children, abandon such a cruel procedure as renders them miserable for something over which they have no control.

Let me read to you a clipping from the Kansas City *Star,* published not very long since, of a cruel punishment still in vogue in a foreign country and see if it does not sound extremely barbarous; but our own method of capital punishment falls but little short of this:

> "Freiberg, Saxony, July 22, 1908. Grete Beier, the 18-year-old daughter of the mayor of Freiberg, was beheaded last night in punishment for the murder of the man to whom she was engaged to be married.
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> "The executioner of this young woman reached the city last night. He carried a thin, long box containing the ax with which he did his work and also brought with him a hand-bag with a suit of evening clothes. The wearing of this garb is an official requirement of the somber occasion. The preparations for the execution of the death sentence at the prison had been completed and the man did his work quickly and privately and departed from Freiberg as quietly as he came.
>
> "The executioner is an anonymous person sent here from Dresden on the announcement that the king of Saxony had refused to pardon Grete Beier for her crime."

Notice if you will, the pomp and power displayed by this bloodthirsty headsman in taking the life of this helpless girl, a mere youth in age, as it were. Money bought what human sympathy this man possessed and his cruel, animal propensities predominated in the execution of this young girl. A physician who lends or hires himself to the hangman in this country to ascertain when life is extinct of his executed victim, becomes a partisan to the crime, if it be a crime, and is no less a fiend than the headsman with his bloody ax. Therefore, gentlemen of the medical profession, let us draw the line at holding the pulse of a dying man at public and private executions. If we, as a profession, would absolutely refuse to officiate at a legal hanging, we could not, of course, prevent it, but we could at least, cause the State to make some comment on the stand taken by us, which would arouse public sentiment for or against capital punishment and I sincerely believe it would aid much in abolishing the death penalty.

Viewing capital punishment from the standpoint I have taken is not the only opposing feature in the matter, but there are other plausible

and legitimate reasons for disapproving this method of punishment. There are many cases on record where innocent men were convicted and hanged on mere circumstantial evidence, and in an instance like this, I ask, what are we to do? There is no appeal from the courts of cold death. The trial is finished and the case ended in this earthly tribunal. There is nothing more to be done between man and man, and God of the universe must adjust the sad difference, and I fear we can never receive forgiveness for having made this awful mistake. We had better, by far, send all murderers to the penitentiary for life than to kill one innocent man on the gallows. Call to mind, if you please, the sad case of Dr. Theadore Durant, of California, who was hanged on circumstantial evidence for the supposed murder of two young girls, one of whom he was soon to have married, whose bodies were found in a church tower, and after the legal execution of this Christian young man, the janitor of the church confessed to the crime. When you learned of that sad mistake, that awful blunder on the part of justice, could you not hear in your mind and see in your dreams, the earnest, pathetic pleadings of that innocent soul as he stood on the scaffold before his Maker and before men, proclaiming his innocence, and begging pitifully for mercy, but all to no avail? God help the human race to establish some infallible means by which men may know when man is telling the sublime truth. Had the court known that the utterances of this young man were true, there would have been no conviction and hence, no execution. If all men, at all times, were absolutely truthful, there would be no need for temples of justice in every county in the State, but as it is, just men are persecuted, prosecuted and executed, by the prevarications of his unjust fellowman. There are so few truthful men in the world that when one is called on for the truth he is not believed by those who demand of him the truth and nothing but the truth. Lawyers subsist mainly on the outcroppings of untruthfulness among men. Justice is easily administered where it duly belongs when all concerned tell nothing but the whole truth; but there is not a human being, to my knowledge, possessing all the characteristics of a rational man, who, knowing himself guilty of a crime for which an innocent party is being punished, will reveal the truth and take upon himself the punishment that is being inflicted on the innocent one. If all men in the world were imbued with that true principle of manhood which characterized Damon any Pythias, the great historical demonstrators of friendship, we would have but few if any innocent men put to death.

I once knew a man who had been convicted and sentenced to death on circumstantial evidence, but the good Governor commuted his sentence to life imprisonment. After serving ten long years in prison, the true murderer confessed to the crime. The poor man was then liberated and sent home to his family broken-hearted, with ten years of the best part of his life squandered and without a dollar for all these years of hard labor. Pardon me for the digression; but I cannot refrain from

saying a few words in behalf of innocent convicts who might be serving, or may serve, time in the penitentiary on a false conviction. Every one of them, whether life prisoners or otherwise, should be reimbursed for all the sorrow and humiliation that inevitably befalls them while incarcerated, for it was a mistake of the State and not of the individual; hence, a liberal remuneration is justly due them. I also believe that all prisoners justly serving time, who have a family, or an old father or mother in need of help, should have set apart a portion of the proceeds of their labor over and above what is necessary to support themselves, to go toward supporting their family. I do not believe so much in making the penitentiary a State institution for furnishing employment for its idle criminals, but I do believe in making it an adult reformatory for those who are so unfortunate as to be sent there, by teaching them to become wage-earners for their needy families by the sweat of their brow. Many of them could furnish more means in this way than they were accustomed to do when at home, and I am sure it would detract nothing from the purport of the imprisonment.

If it were not for the death penalty being inflicted legally, there would not be so much rabble and rioting in this country. Legalizing the killing of human beings is an incentive to the lawless who have, or imagine they have, a grievance against a certain individual or individuals, to reep revenge. Hanging a man is too suggestive to those inclined to take the penal law into their own hands. If the State did not practice such harsh methods in inflicting punishment, there would not be so many innocent ones to suffer and to die at the cruel hands of a bloodthirsty mob. The memory of the recent rioting at Springfield, Illinois, and at a less recent period at Springfield, Missouri, is still fresh in your minds. If we ever succeed in arresting mob violence, we, as a State and as a nation, must abolish capital punishment and cease to cultivate and inculcate the Cainish principle that endows man's sinful nature. Man has been possessed of murderous instinct since his creation. No being is more cruel than unrestrained man. In olden times, in the period when Christ and his teachings were proximately fresh in the minds of all living human beings were cruelly thrown into the arena to be devoured by ferocious beasts as a punishment for some trifling or imaginary offense committed and as a means of furnishing public amusement for the heartless on-lookers. Man has been taught to kill his fellowman whenever a legitimate provocation prevailed, and we as a people prefer to settle national difficulties by war rather than by words. Our standing armies are bantering batteries, incentives to other nations for murderous retaliation, and until we exercise more wisdom in the power of arbitration, we will continue to school our sons and our soldiers in human warfare. For the sake of mortal man and his posterity, let us forever keep thumbs turned upward when any great battle for national supremacy, or other issues, may be before us.

Man is not a thief, a liar or a murderer from choice alone; there is some mental abnormality responsible for the perpetration of any of these, an absence of will power, the natural check of licentiousness, is usually wanting, hence the animal propensities predominate in whatever direction the individual is weakest. Thieves and thugs are lacking in that cerebral nicety that functionizes a well-balanced mind in every particular. A murderer who kills for a reward or revenge, does his deed at the instigation and dictation of an unsound mind, he is a victim of emotional insanity acting on the quickened impulse of an excited brain which, in its normal state, was crouding the borderline with questionable closeness. There are many minds in their natural regimé, hovering so near the line of demarcation that the least excitement may land them over on the perilous grounds of insanity for a veritable time at least, and after the excitement subsides and all provocations come to a close, they will gradually return to their original state of mind. This mental freak which has been appropriately named "brain storm," may come to an individual possessing all the qualifications that go to make up a rational being except the power presiding over self-government which may be weakened or entirely lacking. An individual thus constituted, is constantly floundering beneath abnormal impulses, which may be to lie, to steal, or, worst of all, to murder. They may, unfortunately, yield to all the base influences of such a mind. Like a ship on the stormy deep without a captain, the craft is either left to the storm's mercy or poorly manned by an inexperienced substitute who battles unsuccessfully with the turmoils of an unknown sea. Mind without a master is as treacherous and as dangerous as a voyage on board a tempest-tossed vessel. When there is no storm the ship floats gallantly over the smooth bosom of the ocean with little need of prowess, but when all is excitement, and the tempest rages with increasing fury, then it is, for the safety of all, that the captain's services are so much demanded. So with mind without a moral mediator, when storms of passion arise clouding the skies of sanity, mottling the already insensitive brain forces that inhibit the promulgation of criminal deeds, the helpless victim unequal to the emergency, pounds about in this sea of insanity, striking out blindly and unhesitatingly killing his offender. After the storm of madness has spent its force the individual resumes his normal status with a dim remembrance that something awful has happened while in this state of dualism. The numerous insanity dodges taken by murderers, has caused the world to wonder if all who take the life of a fellowman are not really insane. I believe the great majority of murders committed are done by those temporarily if not permanently demented. Take the case of Dr. Duestrow, of St. Louis, who was hanged for the killing of his wife and child several years ago. It was satisfactorily proven on investigation, that he was a confirmed paranoiac and was not a subject for the gallows, but a worthy patient for the asylum. There is no law in this country authorizing the killing or destruction of our feeble-minded

or insane subjects. The State has made ample provisions for the care of such subjects and the medical profession should be severely censured for not being able to establish the true mental status of those who call on it for help in the hour of such vital moment to them.

Under the present system of taking expert testimony the whole matter is nothing more than a farce and every time a physician is called on for expert evidence, the profession is belittled and ridiculed by the public in general. The cause of which I am loath to say, is due, mainly, to the expert witness endeavoring, if possible, to favor the side on which he was summonsed. When both the plaintiff and defendant have each its medical experts, there is sure to be a clash in expert opinions and a derision in court. We, as an honorable profession, should ever refuse to go on the stand as experts to be placed at the mercy of an arrogant lawyer who dotes much on getting doctors to wrangle and tangle with one another. I believe there should be appointed by the Governor of each state one or more competent physicians for each county, whose duty it should be to prepare themselves as specialists along the line of expert work and to serve impartially on all cases in court demanding expert testimony, receiving compensation for services rendered from the State instead of individuals, corporations or county. If this method could be adopted, I am sure expert testimony would be more reliable and the profession would be acquitted in a more creditable manner.

In conclusion let me summarize: If there is any one law in the land that should be repealed, it is the present law governing criminal punishment. If we, as an American people, desire to maintain first place in the ranks of higher education and greater civilization, we must shake off the shackles of tyranny that bind us to that cruel creed of paganism in punishing our criminals.

Now with this brief record of personal sentiments regarding the whole criminal affair as stated, I trust you may see the matter as I see it and lend your professional influence in bringing about a civil reformation of capital punishment.

MALPRACTICE, FROM THE DOCTOR'S STANDPOINT.*

By John Ashley, M. D., of Bloomfield, Mo.

Malpractice, for the purposes of this paper, we define as bad practice in medicine and surgery, leaving out of consideration its application to the practice of dentistry, pharmacy or law. By the way, malpractice of *law:* whoever heard of such a thing? Whoever heard of an action for damages against a lawyer for injuries sustained by those whom he has operated on? It is true a judge may be impeached; but it seems a lawyer may so handle a learned witness, or a defendant in a suit for malpractice; or an expert medical witness in other suits, in such a way, as to wound his feelings, injure his reputation, and ridicule his profession, with the coolest impudence, with perfect impunity, and the most complete immunity. But that is another story.

We view this subject from the standpoint of the doctor, rather than that of the lawyer or the layman, because that is the point of interest and self-interest is paramount, and self-preservation is the first law of nature.

Malpractice we define as the bad, unskilful, or negligent, practice of medicine or surgery, and this may be the basis for either criminal or civil action in the courts. *Criminal* malpractice, where drugs are given or operation done, with intent to injure the patient, or where injury is caused through gross ignorance or gross neglect, or where the administration of the drug, or the operation done, is forbidden by law.

Civil malpractice, where the physician is liable to his patient in damages, the result of negligence or ignorance. *Negligent,* where from want of attention the patient fails to receive such treatment as his situation required. *Ignorant,* when medicines are administered, or the disease or injury treated in a way calculated to do harm, and which does do harm, and which would not be done by an ordinarily skilled physician and surgeon of the locality where injury happens.

As *civil* action is the form in which most suits for malpractice are commonly brought, we will in this paper consider only this phase of the subject. The rapidly increasing number of such suits, in the last ten years furnishes the reason and the incentive for the presentation of this topic. The liability to suits of this kind is so constant and the risk to reputation and property involved so great, that it is absolutely necessary for the reputable and honorable physician to know his position, and that some concerted action be taken for the protection of the medical pro-

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fession against the irreparable injury wrought by suits for alleged malpractice. It goes without saying that no doctor should be guilty of malpractice; yet the best of us are liable to face a suit for damages, have our reputation imperiled, and the savings of years jeopardized. The suit itself, even if nothing comes of it, raises a presumption against the physician, mulcts him in the costs of his defense, and thus does him a personal and pecuniary injury. Fully 95 per cent. of these suits for civil malpractice are absolutely baseless, and are either attempts at blackmail, or prompted by personal spite or professional jealousy. It is well, therefore, to know our responsibilities, our liabilities, and our rights, and in both the State Association and the County Societies to have an understanding as to the best ways and means of protecting ourselves against the assaults of unscrupulous lawyers, ungrateful patrons, and malicious competitors. We say unscrupulous lawyers, because the attorney who takes a case against a doctor, usually does so on a contingent fee, and so in order to attain success and a division of the spoils, at all hazards and by all means, does not hesitate to ridicule the profession and to humiliate the individual doctor on the witness stand. We say ungrateful patrons because as a rule, those who bring suits for damages are those for whom extra or gratuitous service has been rendered, and in the rendering of which oftentimes the doctor has been put to very great inconvenience and worry. We say malicious competitors, because in 99 per cent. of cases where suit for damage is brought, there is some doctor behind it, inciting and pushing it along to gratify some personal spite or in revenge for some real or fancied wrong.

The *responsibilities* of the doctor in the premises are briefly these: 1. Physicians and surgeons holding themselves out as such, engage that they possess the reasonable and ordinary qualifications of their profession, and are bound to exercise reasonable and ordinary care, skill and diligence when treating a case. This is nothing more than the application to them, of the same principles of justice which regulate the responsibility of individuals in other avocations.

2. This care, skill and diligence must be such as the *average* physician and surgeon possesses and exercises in that general neighborhood. Anything less would fail adequately to protect the public.

3. Physicians and surgeons are expected to keep up with the times, and employ the best methods in use in their locality. No progressive and conscientious physician will do less.

4. Physicians and surgeons are bound to give the patient the benefit of their best judgment. Competent and honorable practitioners are willing to be judged by these standards of law in the practice of their profession.

The doctor's *liabilities,* are, briefly, as follows:

1. If the physician and surgeon depart from the generally approved methods of practice and the patient is injured thereby, the doctor is liable.

2. If the injury to the reputation or feelings of the patient is sustained through the physician having revealed his privileged communication, he is liable.

3. If pain, suffering or injury be caused to the patient, by the neglect or unskilful treatment of the physician, he is liable.

The *rights* of the doctor may be summarized thus:

1. The skill required in a rural community, away from centers of learning and hospital facilities, would not be as great as that expected from a city practitioner.

2. Physicians and surgeons are not liable for a mere mistake or error of judgment.

3. If patient in any way contributes to his injury, by not obeying the instructions and directions of his physician, the doctor is not liable.

4. If the injury does not arise directly from the physician's treatment, or neglect, he is not liable.

5. The burden of proof is on the patient.

Minor considerations favorable to the doctor are:

1. It is very hard to prove bad treatment of a case, when correct diagnosis is admitted, because authorities differ so widely.

2. Where surgical operations have to be performed, in an emergency, under unfavorable conditions, it is very hard to prove unskilful treatment.

The questions to be determined, to constitute malpractice, are these:

1. Has injury been done? And here it may not be amiss to itemize the most common ways in which harm may be done. (1) By septic infection; (2) by a syphilitic infection in vaccination; (3) by tetanous infection; (4) by overdose of a drug; (5) by the administration or use of a wrong drug; (6) by unskillful manipulation in surgery; (7) by erroneously certifying to lunacy.

2. The second question to be determined is: Did the medical attendant, in his treatment of the case, show a want of knowledge in the principles of his art which are the common property of the profession in his neighborhood, and which have been sufficiently long established to become known to him, had he been ordinarily watchful for improvement in his art?

3. Did the attendant in his treatment of the case, depart from the established rules governing such cases, in any material degree; if so, what good reason had he for so doing?

4. Was the amount of care and attention given equal to that ordinarily required and given in such cases?

Such being the situation in which we are placed in the practice of our profession by the nature of our duties, the provisions of law, and the rulings of the courts, it is important to inquire, how we may best avoid

the risks to which we are exposed, and the annoyance and expense of defending a suit for malpractice. As a contribution to the solution of this problem, we offer the following suggestions:

As regards the *personal* aspect of the case:

1. Let every man, to the extent of his ability and opportunity, equip himself in knowledge and means for the best possible achievement in the practice of his profession.

2. Every doctor should inform himself, as to the legal aspects of his relation to the body politic, his rights and privileges, his responsibilities and liabilities to his patients, and the community at large.

3. Let every man use his knowledge and skill according to his best judgment, in every case, and where matters develop which may render him liable, let him call counsel so as to have corroboration of the facts.

4. If bad results occur, be sure to explain the cause to the patient and friends and impress the fact on their minds that it was unavoidable.

5. Keep on friendly terms with your competitors. The idea that to sustain himself, a doctor must perpetually antagonize some other doctor is a relic of the barbarous past. Let the ethical principle of the Great Physician govern your conduct in this matter, "Do unto others, as you would that others should do unto you."

6. Every doctor should secure protection in some good defense company, so that if he should be caught in the toils he will have ample means and the best legal talent for his defense.

Viewed from the standpoint of medical organization, we believe that the State Association and the County Societies can do something in this matter, both directly and indirectly. Indirectly by (1) the benefit to members, from the papers and discussions at the meetings, thus keeping posted and up-to-date; (2) by promoting a good understanding and feeling of good fellowship among members, thus avoiding antagonism; (3) by an effort, on the part of members to mould public sentiment, and by all honorable means to discourage the bringing of suits for malpractice.

In a direct way we suggest that the Association and affiliated societies can do something along these lines: (1) In connection with other State and County Societies, to seek and obtain the needed revision and amendment of State laws relating to malpractice. Especially in this State, to secure the amendment of the statute fixing the time in which suit for damages may be brought, and making it one year instead of five, as at present. (2) To formulate and adopt by-laws for the guidance of the Association or Society, in case of suit for malpractice against any of its members. (3) To investigate every suit for malpractice brought in any county in the State, and take any steps that may be necessary for the honor and welfare of the profession.

We conclude that malpractice is a thing which the doctor should sedulously guard against, and concerning which he should avoid even the appearance of evil. That a suit for malpractice is an ever present danger, oftentimes a malicious attempt at blackmail, and always a source of humiliation and worry, if not of actual loss in dollars and cents. For these reasons the doctor should be thoroughly informed concerning his responsibilities, his liabilities, and rights. His personal character, and his standing in the profession should be such that, if assailed in this way, he may merit and receive the assistance of his professional brethren. In this, as in other things, eternal vigilance is the price of liberty; and he is the safest doctor who is prepared for emergencies, though they may never arise.

THERAPEUTICS, AND ITS RELATION TO THE PRACTITIONER.

By G. W. Whiteley, M. D., of Albany, Mo.

Therapeutics, pathology, and patho-physiology have all to do with general medicine and, in relation to the doctor, form the basic principle of his success as a practitioner. Purity of drugs and pharmaceutical compounds, with laboratory tests as to physiological action in reference to toxicology and general action, as sedatives, stimulants, astringents, antiseptics, etc., belong to, and are the peculiar business of the chemist and pharmacist. Their relation to the physician is to the giving into his hands those preparations, in a pure state, with a definite known quantity for dosage, so the action with absorption will be definite and the toxicology, if any, may be understood. Thus, the physician may treat his patients with absolute confidence and knowledge of his remedies; here stops the office of the chemist and pharmacist in relation to the doctor, therefore the ground is taken, and rightly so,—therapy belongs absolutely to the physician himself.

While we consider the term patho-physiology ambiguous, yet there is a distinction to be made between a true pathological and physiological condition, one being a depression, or morbific condition, neutral, muscular or pertaining to the mucosa, and therefore the term probably conveys to the mind existing conditions when used in relation to any morbific state.

We are perfectly aware of the existing conditions in the teaching and study of therapeutics, yet there is not a physician who has given it a passing thought, that does not see the deplorable conditions we have fallen into through the neglect of this, the very basic principle of our profession. There is a distinctly different drug action, as well as thermal, mechanical, water and electrical currents, on the human body, in a pathological, a patho-physiological condition, and a physiological one. The physiological tests as made on frogs, dogs, cats and guinea pigs, are insufficient; yet we could not make normal tests on the human body such as are made with those animals in order to perfectly understand their action; but these tests, as to heat and baths, can be, and are, tested daily in different avocations and conditions of life, and we are not taking advantage of the opportunity in their use; for instance, the stoker on our naval vessels would make an ideal test of the physiological effects of heat, as well as muscular massage from exercise; electricians, mechanical engineers, as to vibratory massage, or the direct application of the vibrator to the subject himself. Electrical currents are now having rational tests, by the different electrical and light appliances, and being placed in shape to be used by the physician throughout the world.

The instrument maker's business is to make for the surgeon every appliance necessary for every operation, but not for one moment would he dare dictate to the surgeon when or how to use them; if so, what use have we for the surgeon, except as a helper for the manufacturer of his instruments? But the one great principle of drug action is, and can be, demonstrated only through the treatment of the sick by the physician. The doctor who claims that he has not the time to do this is indolent, indifferent, or incompetent, and is absolutely a fraud. There is no excuse for the man who does not watch his patient for drug action, for there are three conditions existing in every patient, or, until the third is disproven. First, the morbid condition, to be treated; second, the treatment to be given, of drugs, the dose, and the time to be given; third, the idiosyncrasies, if any, to the treatment. So it is imperative for the doctor to watch. We might add a fourth condition, also,—a time to reduce dose or extend time, or to entirely discontinue some of the treatment. This can only be done by closely watching your patients; it does not necessarily compel the physician to spend any unnecessary time of waiting, but only close observation. And this brings us to another issue or condition that the profession has overlooked,—the adaptability of the student as a physician. That "doctors are born, not made," is absolute, not chimerical; it holds good in every avocation of life; the surgeon's intuitions lead him to perfect himself in the mechanical part of his profession, as well as to perfect the touch of his fingers. The eye of the true doctor takes in the facial expression of his patients at a glance,—the eye, its dilated or contracted pupils, the congested conjunctiva, the ailments of the entire face, the hesitancy or quick protrusion of the tongue, its flabby or constricted condition, the coating,—that he may judge the condition of the alimentary tract as to absorption as well as secretions. His fingers fall through intuition to the radial pulse, while the eye has observed the temporal veins and the condition of the carotids, and respiration is closely observed and counted. This, an open book to him, is a blank to a man who perhaps should be behind the counter, following the plow, or some other avocation. This opens to the doctor a way to apply his remedies which he so thoroughly understands by close observation of his patients as to speedily relieve them of their condition. The doctor recognizes immediately the action he wishes from his drugs, and when the second visit is made he waits not for time, but changes *time, dose* and *drug* to effect, if none is had. We have made the deplorable mistake of placing in the chair of therapeutics in our schools men who have a *book* knowledge, and not the basic principles taught him by training at the bedside, or coming in contact with disease and its treatment.

Perhaps you say that the professor of practice shall, or should, attend to this, but I think not; disease and its sequelæ belong to them for demonstration, but through this neglect the graduate is turned out on suffering humanity with no knowledge whatever of the true action of drug therapy, and is left to learn for himself through sad experience the secret of their action on diseased tissue, and also is disgusted, perhaps,

and becomes a therapeutic nihilist, or a skeptic. If intuitions are worthy he becomes negligent and non-observing; this is shown and proven by the foolish use of morphine for every pain by many physicians, who do not stop to heed the existing conditions, to observe whether the pupil is contracted, or the facial expression calls for a midiratic and hypnotic, but overwhelms the patient with narcotism at the expense of the heart, trying to force the blood through capillaries already tightly contracted; so in the use of all remedies; they absolutely have their place and conditions exist to apply them for the most good.

This has again been proven by the drug cactus and its derivative, cactin. Dr. Hatcher finds it nearly nil in tests on dogs. Another very foolishly took some one hundred cactina pellets with no perceptible effect on a normal heart. Dr. Geo. F. Butler positively says his tests on a weak and wavering heart proved it to be a good and efficient remedy. To this I can positively bear testimony in a weakened condition of the heart. In hypertrophy, where the heart has encroached on other vicera, and seemingly beats stronger but is really in a weakened condition, being quick and heavy, in combination with digitalin, it smooths down the heart and permits a sweet sleep to the patient, and holds him in a comfortable condition. This I failed to get with either of the drugs singly.

Here are tests made in a physiological condition, refuted by bedside tests by Dr. Butler and myself. Dr. Butler states that he had given a dog ten grains of morphine with no perceptible effect; would anyone here dare give such a dose to a man? Certainly not, yet in certain morbid conditions as much as three grains have been given in two or three hours, stopping the trouble and no bad results following. This only the more proves our ground, that therapeutics is absolutely the business of the practitioner, and is different in pathological or patho-physiological conditions from a physiological one. It is also absurd to make the tests on animals to establish proper dosage for man in a definite sense as to amount given. There is a rule followed by physicians who use concentrations and alkaloids that is perfectly safe and rational. Use minimum doses often repeated till full physical effect, when the time of giving can be lengthened to hold the patient at the proper effect as long as desirable.

Drug effect can be had in a very short time if a pure concentration is used and absorption takes place readily, in fact much earlier than is claimed by most pharmaceutical houses. Glonoin, atropin, and aconatine, in from two to three minutes, if dissolved on the tongue or given dissolved in hot water, show not a full, but a very perceptible effect. I have repeatedly had profound action of atropine in 1-500 gr. doses, given every fifteen minutes, in thirty minutes in cholera infantum, while perhaps the same patient where normal conditions existed, 1-250 grs. would have been found to produce the same effect, as absorption takes place more quickly where the glands are weeping profusely. Here theory will say "impossible;" but practical tests will show this to be true.

It is self-evident that we have been derelict in our duty as general

practitioners by not more closely observing our patients and remedies, just blindly trusting to the pharmaceutical houses for direction, using any old thing recommended by them, and failing nine times out of ten to produce the desired results; throwing aside remedies that were active and productive of great good, pronouncing them "fakes" because of our own ignorance.

Again, the true tonic effect of a drug is not had in the giving of large doses, but in the saturation of the system by small doses, so that the over-stimulation of nerve centers is avoided. We have a condition existing from our remedy to combat, as well as the morbific one produced by disease; while perhaps it is a fact that full maximum doses may be called for at times, as in malaria with quinine in certain stages of that poison to eliminate the germs from the body. We may look for somewhat different views in tests thus made, from the fact that some are more susceptible to treatment than others, and some physicians are more acute in their observations than others; some they cannot, or will not make proper tests,—it would be superfluous for me to say why; humanity and its frailties are too generally understood to elaborate on the subject here,—but the ultimate end will be better drug action, and therapy will have its place where it belongs, more rational treatment will be devised, while the pharmacist will not dare to place on the market anything but pure and efficient drugs and compounds.

It is here that the physician has placed himself in the hands of the pharmaceutical houses, and he has to some extent been made a tool and cat's-paw to rake out their chestnuts; no combination or set of resolutions will effect this; it is for every one to prove himself competent to test his remedy on his patients, and to cast out the chaff. A poor gun in the hands of a good marksman will not do good service, and in the hands of a poor one is dangerous—but a pure drug, and that thoroughly understood by the doctor, is the greatest blessing to mankind that has ever been devised by man.

Says Mr. Bok: "We laymen have a right to expect that what a physician does for us he does of his own knowledge, and not after the knowledge of a printed formula, often written by a man who never graduated from a medical school. We go to him for advice, for his prescription, but not for one originated by a Wampole, a Parke Davis, a Fairchild, a Mulford, a Wyeth, or any other commercial firm." Here the nut is cracked by a layman, and never was there a more potent truth spoken. Our honor demands that we make this knowledge of drug action our own, and that we prescribe for our patients what we know has been proficient in our hands, irrespective of the word or biased opinion of any man who is not practicing medicine or who is too prejudiced to make a pathological test; and when we neglect this, the very basic principle of our profession, we neglect the whole.

I do not wish to be misunderstood,—the chemist and pharmacist are essential to the physician; but I do most emphatically wish to say that final drug action is not to be found in their hands.

PERSONAL EXPERIENCE IN GUNSHOT WOUNDS.*

By John D. Seba, M. D., of Bland, Mo.

There can be no good classification made of gunshot wounds. The anatomical is probably the best, though it, too, is open to some shortcomings. Everyone is a case unto itself. There are very few cases just alike. General principles, learned from the hard road of experience, are now laid down for our guidance and these experiences, as a rule, have been learned by army surgeons.

In considering a gunshot wound, we consider the location of the injury, the missive producing the injury, the force of the ball, and its course. If large blood vessels have been severed, they must be tied to stop bleeding. In case any of the more vital organs have been injured, it behooves us to find out the extent of the injury and whether the injury may be repaired, thus avoiding a fatal termination of the case.

In summing up a gunshot wound, we must take into consideration the missive that produced the wound, whether shot or shell; if a ball, whether of lead or steel. The force of the missive, or velocity of the ball, plays an important factor. A steel bullet with great velocity inflicts less injury than a lead ball shot with less speed. Our modern Krag-Jorgensen guns with their steel bullets have been constructed along humanitarian lines. With them a man may be shot through a limb or through the breast and if no large blood vessel has been cut, causing death from hemorrhage, the man will be well and ready for duty within ten days from the time he received the injury. Such remarkable occurrences are due to our modern guns and methods of warfare. Results of that kind could not be looked for when we were yet using the now obselete musket with its lead ball, short range and low speed. These modern guns also relieve the surgeon of hunting for bullets. This, too, is in its favor, for many times the meddlesome surgeon has finished for the undertaker what a bullet has started, but which nature would have overcome if the surgeon had not hunted for the bullet.

Bullets should be extracted when they are just beneath the skin and are easily accessible, or when they are pressing upon some vital organ, such as the spinal cord, the brain, or the meninges, or wherever their presence would cause a disturbance afterwards. No attempt should be made at their removal when they are located in the fleshy part of the body, arm or leg. In case of gunshot wounds of the bowels, the wound where the ball has entered should be dressed and then an opening made

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in the median line and parallel with the wound. This operation is performed, not with a view of finding the bullet, but with a view of obtaining knowledge of the conditions in the abdomen. If, upon inspection, it is found that the gut has escaped injury, the belly may be closed and the patient allowed to recover. If the bowel has been wounded, the peritoneum should be wiped clean of fecal matter, the torn gut should be repaired, the peritoneal cavity again cleaned by wiping with sterile gauze, and the abdomen closed. Drainage may be established through the original bullet hole. No extra search should be made for the bullet unless found while manipulating the parts or while repairing the same. Too much manipulation of the visceral peritoneum is apt to impair its vitality, and thus further endanger the life of the patient by setting up a fatal peritonitis.

Gunshot wounds of the chest should be carefully examined for the purpose of ascertaining the amount of bleeding the wound has caused. If the bullet has severed an intercostal artery and the flow of blood is to the inside, the pleural cavity will be filled with blood. A rapid increasing dullness in the chest after a gunshot wound is evidence of bleeding into the pleural cavity. If the bleeding is in the lung, the patient will cough up bloody froth.

Gunshot wounds are generally accompanied with considerable excitement or shock. This is best overcome by a hypodermic injection of morphine. Water should be given in large quantities. A little salt added to the water adds to its remedial efficacy which is two-fold—to restore the volume of blood, and to overcome shock. It will do both.

The *don'ts* in gunshot wounds are just as important as the *do's*. Briefly stated they are: Don't probe for a bullet unless there are these three reasons for it,—first, that you are sure you can find it; second, that hunting for it will cause less injury to the tissue than the bullet would cause if it remains; third, that you are positive the bullet, if not extracted, will do positive injury to your patient. One of the greatest dangers in gunshot wounds is the infection of the wound at the time of infliction. By far the most dangerous infection is by the tetanus bacillus. Patent gun-wadding very often contains among other htings some horse hair. The tetanus bicillus has its main habitat near barns and stables and the putting of horse hair in these patent gun-waddings is responsible for so many cases of tetany following gunshot wounds.

The dressing that has given me the best satisfaction is the wet pack, as it keeps the wound clean and affords the best drainage. Especially is this true of wounds near joints, bones or cartilages.

The average country practitioner sees more cases of gunshot wounds than he expected to see when he graduated, and he learns more from sad experience than from books or lectures. I shall only report a few cases at random to show a variety of gunshot wounds.

Case 1. A girl, 13 years old, suffering with typhoid fever, was accidently shot by a neighbor boy. The girl was lying on her side. He

pointed a revolver at her, thinking it was not loaded, and snapped it at her. It fired and shot her through the lower part of the abdomen and right hip. The ball came out a little above the middle of the right gluteal muscle. Owing to the spare diet this patient had received on account of her typhoid fever the intestines must have all gotten out of the way of the bullet for she never suffered any inconvenience and made an uneventful recovery from both the gunshot wound and the typhoid fever.

Case 2. A boy, seventeen years old, went to a dance, carrying a revolver in his pocket. It was discharged accidently in his pocket while dancing, the bullet entering the center of the calf of his right leg. I was fool enough to probe for the bullet. Not finding it, I took the young man to St. Louis to have the bullet located with the x-ray. The bullet was located between the tibia and fibula, about two inches above the ankle joint. The roentgenologist said I should take him home and cut it out. He had marked the exact place where the bullet was located so that I could not miss it. I took him home and probed for the bullet but missed it. I had split the leg for fully four inches, both front and back, run my finger up and down between the tibia and fibula, but the bullet had migrated to other parts of the body. The boy got well in spite of the buliet hunt.

Cases 3 and 4. These are best reported together. The marshal of my home town, in a fit of anger, shot a woman through the heart. When I reached her side ten minutes later she was already dead. Her clothes were powder burnt and the bullet had severed the aorta. There was nothing to do but to hold an inquest, which was done. Meanwhile, a posse captured the culprit, after putting a double barrel load of buckshot into his abdomen. I gave him a hypodermic of morphine, then picked out about forty shot from under the skin of his abdomen. He died the next day. A post-mortem showed that many of the shot had entered the abdominal cavity. He died from a peritonitis. We also noticed that he had peritoneal tuberculosis.

Case 5. Miss C., aged about 25, was accidently shot in the ankle by her brother while he was attempting to clean his gun and thought it was not loaded. It was a load of shot and was fired at short range. Part of the gun wadding was still found in the wound. It required a general anesthetic to dress this wound; lacerations had to be cut away, tendons had to be trimmed and sewed together, the skin had to be loosened up and stretched over the injury to give it at least a partial skin covering. A wet dressing was used for the first few days; afterwards an oily dressing was used. Patient made a slow recovery with a useful limb.

Case 6. Man, 37, was out shooting. He set the muzzle of his gun on his shoe. From some cause or other it fired, completely cutting out the middle toe. The fragments were cut away, the wound cleaned and the edges approximated. Result, a speedy recovery with a slight narrowing of the foot at the toes, which may be regarded as an advantage rather than a disadvantage as the foot was rather broad in the first place.

Case 7. On account of a local option fight in a neighboring town, a man was shot in the bottom of the foot while he was running away from the marshal, trying to avoid arrest. I was sent for the next day for the avowed purpose to take the ball out of the foot. The ball was apparently in the hollow of the arch of his foot. The wound seemed clean and aseptic. Probing had failed to locate the ball. It took all my power of moral persuasion to talk him out of the notion to have any cutting done in the bottom of that foot. His recovery was only a matter of a few days, whereas, if we had operated it might have been several weeks, and he might have had a crippled foot for life. The most brilliant surgery I ever did in my life I did in this case when I persuaded this man to let his foot alone and not entrust the plantar surface of it to a surgeon with a knife hunting for a bullet.

DISCUSSION.

Dr. Walter C. G. Kirchner, St. Louis: In wounds of the head it is best to cleanse and shave the area and to enlarge the opening so that good drainage may be established. Gunshot wounds of the head are nearly always fatal, the patients dying from meningitis. There are, however, some interesting exceptions. A boy, wishing to commit suicide, shot himself in the temporal region on the right side; the bullet passed to the opposite side of the skull and was reflected around towards the back; it was located on the right side by the *x*-ray. He made a good recovery. In gunshot wounds of the chest it is best to immobilize the affected side, either with plaster of Paris or, better still, with adhesive plaster. In gunshot wounds of the abdomen, where the peritoneal cavity has been entered, laparotomy is indicated because we have no assurance that there has been no injury to the intestines or other viscera. Only too often a fatal hemorrhage and a peritonitis have resulted from the expectant treatment. It is unwise, in emergency work of this sort, to give morphin, because the real condition may then be hidden and a fatal peritonitis masked. In gunshot wounds of the extremity the essayist has pointed out the wisdom of not probing; little information is gained by doing so and an infection is easily invited.

Dr. W. B. Deffenbaugh, St. Joseph: I have been Health Officer in St. Joseph for four years, and have had to deal with a great many gunshot wounds. Gunshot wounds penetrating the cranial cavity are always dangerous. A young man recently shot himself in the head through the temporal bone. I saw him a short time afterwards. A large opening was made, the ball was removed and the patient recovered. I have had some experience in abdominal surgery. I saw a young man who was shot with a 22 calibre rifle, resulting in nine perforations of the bowels. There seemed to be no escape of the fecal contents. Dr. Campbell, with my assistance, opened the abdomen and sewed up the nine perforations. He put in a drain and the patient made an uneventful recovery. In cases of that kind we operate quickly and get relief. Another case was that of

a negro who was shot near the posterior iliac spine, the ball passing through the abdominal cavity and lodging in the walls of the abdomen near the umbilicus. There were eight perforations in the small intestines, covering a space of about twelve inches. I resected eight inches of the gut and did an end to end anastomosis. The other opening I brought together with Lembert suture and drained. The patient made a good recovery. These cases were taken to the hospital and operated upon immediately. If you wait until you are absolutely certain that the bowel is injured, infection has begun and it is too late to do your patient any good.

Dr. George Halley, Kansas City: I think the saying that all these wounds should be immediately operated upon and treated and the ball hunted out, is a mistake. I have had two or three of these cases, one of perforation of the stomach and some of perforation of the bowels, by a 22 calibre bullet, and they were not operated upon, yet made a good recovery. I think it is largely the calibre of the bullet that should guide the surgeon with reference to the treatment. I believe the small 22 calibre will make a wound that does not necessarily require operation. One Fourth of July a child shot another child in the stomach. There was nothing much in the stomach at the time. They gave her water to drink and telegraphed me when they were coming home. I saw her as soon as they got home in the evening about five or six o'clock. The child was vomiting blood and the water it was drinking. I immediately stopped the water and directed the administration of the water by the rectum. I did nothing with the wound. I watched it from day to day and the symptoms gradually subsided. Everything went along all right and the child made a good recovery and is living now. Another was a child with a 22 calibre shot in the abdomen. Whether it perforated the intestine I did not know. I did not search for the bullet. The child made a perfect recovery without any interference whatever. It depends entirely upon the calibre of the gun whether the wound requires attention or not. The present guns that the army use, while of small calibre, make a frightful wound.

Dr. Frank Hinchey, St. Louis: The condition of the patient at the time of the injury is of great importance to the prognosis that we might give. If the patient has not had a meal for some time before an injury to the upper portion of the intestinal tract, the prognosis would be better than if a full meal had just been eaten. I think perhaps this has something to do with the good results of surgery on the battle field. Usually these injuries are received after a long march during which they have not eaten. In many instances they have recovered without opening the abdominal cavity. This is due to the absence of infection in the intestinal tract.

Dr. Seba (closing): In the treatment of wounds of the chest where an artery has been wounded, the vast majority of cases will bleed internally; if we will watch these cases closely we can tell whether there is internal hemorrhage or not. If the bleeding is internal, we have the symp-

toms of syncope and nausea, and a rapidly developing pleuritic effusion. If the bleeding is in the lung proper, the patient will cough up blood mixed with air. I remember a case where a young man had been stabbed in the chest with a narrow bladed knife. At the time of the injury he suffered numerous attacks of syncopy and nausea and afterwards suffered from dyspnea. These smothering spells became very severe and when I saw him, nearly a month afterwards, there were present all the signs of an pleuritic effusion. We did a resection of a rib, and found that the effusion was clotted blood derived from a wounded intercostal artery. In this case the condition should have been discovered at the time of injury, and the bleeding artery tied. In cases of gunshot wounds of the abdomen the surgeon can be of more real value than in many other cases, for the cases are many times of a criminal nature, and our prompt action may save the life of two persons instead of one, the person wounded and the person inflicting the wound, hence we have a double responsibility.

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, M. D., Chairman. M. B. Clopton, M. D. M. C. Shelton, M. D.

EDITORIAL

A COMMENDABLE LEGAL OPINION.

In a recent trial in St. Louis for violation of the medical practice act, the Court sustained the law and defined what constitutes the practice of medicine in terms that left no element of doubt in the minds of the jury as to the meaning of the law, with the result that the defendant was convicted for practicing medicine without a license. The defendant was one Larson who, though not a physician and therefore not licensed to practice medicine in Missouri, asseverated through advertisements in the daily press that he could cure certain diseases by means of a method which he called the "telconi" system. Larson's defense was that he treated disease without the use of medicines and therefore could not be said to practice medicine within the meaning of the law.

Judge Wilson Taylor, of the Court of Criminal Correction, in whose court the case was tried, was disqualified, the defendant alleging that Judge Taylor was prejudiced against persons not regularly qualified physicians attempting to practice medicine. Judge Taylor, therefore, appointed Judge George H. Williams of the Circuit Court to sit as provisional judge. Judge Williams instructed the jury as follows:

"The Court instructs the jury that holding one's self out and representing and professing to be able to heal disease, no matter by what process, is practicing medicine within the meaning of the law."

The ruling of Judge Williams is indicative of a sentinment unfavorable to any form of medical practice unless pursued upon the high plane

which the seriousness and dignity of the calling demand. The growth of this sentiment, if encouraged by jurists, will have a far-reaching influence in arousing a general feeling against attempted deception and fraud in the treatment of the sick; for the views of such men cannot fail to have great weight in upholding the medical measures which have been established for the protection of the health of the people. We cannot commend too highly such opinions from men whose attainments have raised them to positions of eminence in the administration of our laws, hence we ought to encourage by every means in our power the general acceptance of a higher and more advanced idea of the responsibility of the State in matters touching the physical welfare of the people. The jurist should be as much concerned with the secure establishment of adequate laws for the protection of the health of the people as is the physician, and should lend that intelligent assistance, which by nature and training he is capable of rendering to an eminent degree, in support of every measure which shall strengthen the "nation's greatest asset." None but the physician knows how much unnecessary suffering is inflicted upon a community by tolerating the practices of unlicensed persons who vauntingly proclaim themselves possessed of unusual powers to cure disease; and how many untimely deaths result therefrom.

It is the physician's duty to preserve the health of the people, and among the many disagreeable things that have fallen to his lot in properly fulfilling this duty is battling with ignorance and superstition, quackery and charlatanism; for the masses are unable to discern the true from the false and are easily deceived. For many years this battle was fought in vain, and little was accomplished until after the organization of the medical profession and the exposure of many medical frauds and fakes by Collier's *Weekly,* the *Ladies' Home Journal* and the *Journal* of the American Medical Association. Again, the public instruction of the people by the medical profession as a means of preventing disease, and, furthermore, the dissemination of that important phase of knowledge that sickness can be avoided, when such instructions emanate from recognized sources, have fostered a growing belief that the regularly qualified physician and not the advertising boaster is the true healer of the sick.

We hope the advanced view entertained by Judge Williams in regard to what constitutes the practice of medicine, will be shared by his confrères and the finding of the jury be confirmed by the higher courts. The medical profession must have the assistance of the intelligent jurists and educated citizens of the State in order to enable it to provide adequate protection for the people against the insidious methods of so-called qualified doctors, whose practices in reality are those of quackery, or the alluring advertisements of ignorant and irresponsible impostors.

THE JEFFERSON CITY MEETING.

The fifty-second annual meeting of the State Medical Association will be held in Jefferson City, May 18, 19 and 20. The scientific program, which is published in another column in this issue, contains about 150 papers, the subjects being so diversified and of such practical nature that they will most assuredly appeal to a very large percentage of the members. The program is a flattering tribute to the earnestness and industry of the members of the committee on scientific work, and furthermore exemplifies the deep and wide-spread interest the members feel in the scientific work of the Association.

The new section on diseases of the eye, ear, nose and throat will hold its first session at this meeting. The wisdom of establishing a separate section for these special branches will, we believe, be fully demonstrated at the meeting. The two Sections, the Medical Section and the Section on Eye, Ear, Nose and Throat Diseases, contain respectively 34 and 28 papers; this will permit of a division of the work in such proportions that probably every paper in these two sections will be read and discussed at each session. We suggest that the Surgical Section might with great advantage be divided into two sections, one devoted to papers upon general surgical topics, and the other section devoted to genito-urinary surgery or gastro-enterological surgery.

All sessions will be held in the capitol building. The first day of the meeting will be devoted to the business affairs of the Association at meetings of the House of Delegates and of the Judicial Council. Under the presidency of Dr. Kieffer we look forward to the expeditious dispatch of all business matters so that the work of the scientific sessions shall not be delayed.

The Surgical Section will meet in the Senate Chamber, the Medical Section in the House of Representatives, and the Eye, Ear, Nose and Throat Section in the committee room on the west side of the hall. The committee of arrangements announces that it is practically certain the legislature will adjourn before the time set for our meeting, but in the event of the two meetings conflicting, suitable halls will be reserved for the meeting of our Association.

An important feature of the meeting will be the address of Dr. J. N. McCormack, chairman of the National Organization Committee of the American Medical Association.

The attendance at the annual meetings has been constantly increasing year by year and this year we predict that a larger number will attend than was present at any previous meeting.

VITAL STATISTICS ASSURED.

The bill providing for the accurate collection of vital and mortuary statistics has passed both branches of the General Assembly and is now ready for the Governor's signature. The bill is in all respects a copy of the model bill drafted by the committee on legislation of the American Medical Association and approved by the Census Department of the United States Government, the Section on Hygiene and Sanitary Science of the American Medical Association, the American Public Health Association, the American Statistical Association and the Committee on Uniform Laws of the American Bar Association, and represents the combined knowledge and experience of all those interested in vital statistics and best qualified to speak with authority on the subject. When signed by the Governor—and we have no doubt at all that his approval will be given to this important measure—this bill will place Missouri in the list of states recognized by the United States Census Department as having an adequate system of registration of deaths.

The status of the other bills in the legislature which have been endorsed by the Association, is as follows: Senate Bill No. 150, empowering the Board of Health to summons and compel the attendance of witnesses and the production of books and papers, has been in the House for several weeks awaiting its third reading. Senate Bill No. 334 has passed the upper house. This bill compels the defendant in a trial for revocation of license to take up by writ of certiorari to the Circuit Court and prohibits him from continuing to practice until the Court has overruled the action of the Board of Health. By the provisions of this act the State Board of Health is relieved of the necessity of retrying its case in the Circuit Court, thereby saving considerable expense to the State. All members are earnestly requested to write their representatives and ask that this measure be passed by the House. The State Board of Health should be relieved of this unnecessary labor and expense, and the case reviewed in the courts from the records of the trial.

In the House of Representatives the bill prohibiting certain classes of medical advertising has been reported favorably by the committee and will pass.

In our next issue we shall endeavor to present a complete report of the final action upon all medical measures in both branches of the legislature.

PAY YOUR DUES.

Some county societies have not yet sent their dues and lists of members. The secretaries of county societies should not hold back the dues of those who have paid until all other members pay their dues, as such delay in remitting might result in a dispute as to the standing of the members who have paid but were not reported to the state secretary. The JOURNAL will not be sent to members who have not been reported and all other benefits of membership are denied delinquent members. County secretaries are, therefore, most earnestly requested to make up their lists at once and forward the dues and names of members to Dr. A. W. McAlester, Jr., Bryant Bldg., Kansas City, Mo. This action is especially important now, for only paid-up members can enjoy the privileges of membership at the annual meeting.

DR. McCORMACK'S VISIT.

Preparations for the visit of Dr. McCormack are progressing most satisfactorily. In all the counties which he will visit the members are looking forward to hearing his address, not only because of the beneficial influence which his words have had, wherever he has appeared, in promoting a better understanding between physicians themselves, but also on account of the good effect upon the general public in its attitude towards physicians and the reform measures which the medical profession is to-day advocating, particularly in regard to the protection of the public health. In the efforts to accomplish these reforms the profession has hitherto proceeded without first explaining to the people the reasons why such changes were demanded, and that the end result had for its object the improvement of the physical condition of the entire community, and presumed too much upon the willingness of the people to accept the dictum simply because it emanated from the medical profession, forgetting that, in their ignorance, the people would wrongly construe the real purport of any suggested change unless the benefits were made plain to them beforehand. This mistake has been corrected with the result that the people have assumed a receptive attitude toward measures advocated by the profession, and have shown an eager desire to assist in establishing better hygienic and sanitary conditions.

The burden of Dr. McCormack's message is to create a better understanding between the physician and the laity, as well as to strengthen unanimity of purpose and action among physicians. His visit in Missouri

cannot fail to stir a deeper interest in medical society work among physicians and promote a feeling of sympathetic coöperation by the people with the medical profession. We publish below a few letters from the committees in some of the towns which Dr. McCormack will visit, which show that the members are making enthusiastic preparations for his reception:

Hannibal, Mo., April 21, 1909.

"We are giving the occasion as prominent and wide-spread advertisement as we can. To this end we are using the columns of our local newspapers and sending out letters of invitation to all physicians living at the following places: Louisiana, Frankfort, Paris, Monroe City, Hunnewell, Lagrange, Canton, Palmyra, Perry, Center and New London. The Quincy (Ill.) physicians will be invited through the secretary of their medical society. To arouse a local lay interest, we are sending out 500 personal card invitations to our representative citizens, asking them to come and bring their friends. The meeting will be held at our new High School Auditorium, and will be presided over by some prominent lay citizen.

"We are expecting to give Dr. McCormack a warm reception and a representative audience.

ROBT. H. GOODIER."

Moberly, Mo., April 20, 1909.

"We are making every arrangement for his meetings, one in the afternoon at the Commercial Club Rooms, and the other in the evening at the Fourth Street M. E. Church. Invitations will be issued to every doctor within our reach, and we have the promise of a good meeting.

"As to the influence the doctor's lecture will have in this section, I can not see but one result possible, and that is great good. It is time the public should understand what is right between physicians themselves; and it is time that they should understand better what courtesies are due the physician, not only from his brother practitioner, but from the public. Certainly nothing but great good can result from these meetings.

C. B. CLAPP."

Sedalia, Mo., April 22, 1909.

"This lecture will be advertised in the local newspapers, invitations extended to the teachers and advanced scholars in our schools, to the members of the different ladies' clubs in this city, to the members of the bar and the ministers; will also request the secretaries of nearby county societies to have as many of their members attend as possible. Arrangements have been made to hold the meetings in the Circuit Court Room.

"I have no way of foretelling the effects of his visit; judging, however, from reports from the different places he has visited, I see no reason why the same benefits noted in other places should not be realized here also.

CHAS. B. TRADER."

Clinton, Missouri, 4-23, 1909.

"Our plans are to secure the coöperation of all the literary clubs of our city, together with the ministers of the various churches and the superintendent and teachers of our public schools. Due notices will be sent to the newspapers, together with sketches of his work elsewhere. I will send personal letters to all the physicians in the county and to a number in adjacent counties. I believe both the profession and laity will derive much benefit from the doctor's visit here. We need just such a man as Dr. McCormack to give us a start. I have not the slightest doubt but that the doctor will be greeted with a large and enthusiastic audience here at his evening lecture to the public.

ROBT. D. HAIRE."

Nevada, Mo., April 20, 1909.

"We are making all arrangements necessary to give Dr. McCormack a hearty welcome on May 22d. Have arranged for a joint meeting of the county societies of Bates, Vernon and Barton, and the Hodgen District Society in this city. Will hold a regular session for discussion of papers, and an address by Dr. McCormack to the physicians from 2 to 4:30 p. m. Will have a special open session at 8 P. M., with musical program, the lecture by Dr. McCormack and two short addresses in discussion of his lecture by the Hons. J. B. Johnson and J. B. Harris. We shall leave nothing undone to secure a large attendance, which we feel confident we will have. I can see no reason for any other influence on the profession and the public but the most salutary. The two open meetings held here have elicited great interest and favorable comment. Dr. McCormack's lecture should, and I believe will, have a very great influence for good.

J. ROBT. BUCHANAN."

Aurora, Mo., April 21, 1909.

"I will start with the doctors of the Lawrence-Stone Medical Society and urgently insist that each and every one be in attendance unless Providentially hindered. I shall also request that each invite all other doctors, regardless of their ethics or eligibility to membership, to attend. I expect to reach the laity by the press and pulpit, both of which, fortunately for this locality, are our friends and willing helpers; these I expect to use not once but often, both before and after the meeting. Notices will be posted in business windows just before the date of lecture and personal invitations given or sent to influential citizens and their families.

"I would sooner undertake to estimate the possibilities of a live acorn planted in fertile soil than the ultimate good to come from Doctor McCormack's day here.

A. H. MADRY."

Dr. McCormack will be in the following places on the dates named and deliver an address in the evening at 8 o'clock. The local committees will arrange for morning or afternoon meetings.

Town.	Railroad.	Leave.	Town.	Arrive.	Date.
St. Joseph....	Burlington,	10:00 A. M.,	Maryville,	Noon,	Mon., May 3.
Maryville.	Wabash,	11:35 A. M.,	Gallatin,	2:10 P. M.,	Tues., May 4.
Gallatin.	Wabash,	2:10 A. M.,	Chillicothe,	2:52 P. M.,	Wed., May 5.
Chillicothe. . ..	Burlington,	11:50 A. M.,	Macon,	1:37 P. M.,	Thurs., May 6.
Macon.	Wabash,	2:45 P. M.,	Kirksville,	3:57 P. M.,	Thurs., May 6.
Kirksville.	Burlingon,	6:20 A. M.,	Hannibal,	10:55 A. M.,	Fri., May 7.
Hannibal. . ..	Wabash,	10:50 A. M.,	Moberly,	1:25 P. M.,	Sat., May 8.
Moberly.	Wabash,	6:10 A. M.,	Columbia,	8:10 A. M.,	Sun., May 9;
or Moberly . ..	Wabash,	10:05 A. M.,	Columbia,	1:30 P. M.,	Sun., May 9.
Spend Sunday in Columbia.					
Columbia.	M. K. & T.,	3:10 P. M.,	Sedalia,	6:25 P. M.,	Tues., May 11.
Sedalia.	Mo. Pacific,	2:55 P. M.,	Lexington,	5:25 P. M.,	Wed., May 12.
Lexington. . . .	Mo. Pacific,	7:23 A. M.,	Kansas City,	9:40 A. M.,	Thurs., May 13.
Spend 13th and 14th in Kansas City.					
Kansas City. ..	C. M. & St. P.,	9:00 A. M.,	Liberty,	9:45 A. M.,	Sat., May 15.
Spend Sunday in Kansas City.					
Kansas City. ..	Mo. Pacific,	10:10 A. M.,	Warrensburg,	12:15 P. M.,	Mon., May 17.
Warrensburg. .	Mo. Pacific,	9:27 A. M.,	Jefferson City,	1:00 P. M.,	Tues., May 18.
Spend 18th, 19th and 20th in Jefferson City.					
N. Jeff. City..	M. K. & T.,	5:07 A. M.,	Clinton,	10:52 A. M.,	Fri., May 21.
Clinton.	M. K. & T.,	10:52 A. M.,	Nevada,	12:25 P. M.,	Sat., May 22.
Spend Sunday in Nevada or Joplin.					
Nevada.	Mo. Pacific,	5:25 A. M.,	Joplin,	9:00 A. M.,	Sun. or Mon., May 23 or 24.
Joplin.	Frisco,	7:20 A. M.,	Aurora,	11:55 A. M.,	Tues., May 25.
Aurora.	Frisco,	11:55 A. M.,	Springfield,	12:50 A. M.,	Wed., May 26.
Springfield. . ..	Frisco,	12:05 A. M.,	St. Louis,	7:15 A. M.,	Thurs., May 27.
Spend 27th and 28th in St. Louis.					
St. Louis.....	Trains every hour for St. Charles.		St. Charles,		Sat., May 29.
Spend Sunday in St. Louis.					
St. Louis. . . .	Frisco,	8:00 A. M.,	C. Girardeau,	12:45 P. M.,	Mon., May 31.

AN ASSOCIATION BUTTON.

The executive committee of the Association will recommend that an Association button be adopted as the official badge of membership. The subject of adopting such an emblem has been agitated by a number of members who desire to own a permanent button of attractive design, instead of wearing the usual brass pin and cheap ribbon hitherto worn at our annual meetings. In response to this demand the secretary has obtained a very attractive button which will be exhibited at the meeting at Jefferson City for the approval of the members as the official button of the Association.

AN INCIDENT WITH A MORAL.

Some months ago a physician living in a county in which no organized society existed, subscribed for the JOURNAL. With our acknowledgment of the subscription order and receipt of the payment for one year, we urged the doctor to join the Association through the county society nearest his home town, and explained to the best of our ability, seconded by letters from our state secretary, the advantages of becoming a member of the Association. His replies to our letters indicated that he would join the county society, but there was no need to be in a hurry about it; so we made a note to write him later on. A few weeks ago this doctor was notified that a suit had been entered against him for alleged malpractice. The doctor has our sympathy and we regret that we did not succeed in our endeavor to induce him to join the county society for then he would have had the assistance of the State Association in his defense against this suit.

The incident furnishes an apt example of the importance of maintaining membership in the county medical society.

PERSONAL AND NEWS NOTES

New Physician-in-Chief Appointed for Mount St. Rose.—Dr. Louis C. Boisliniere has been appointed physician-in-chief of the Mount St. Rose Sanatorium for Tuberculosis in the place of Dr. Wm. Porter, resigned.

Dr. William Porter, of St. Louis, and Dr. E. W. Schauffler, of Kansas City, have been appointed members of the Board of Managers of the State Sanatorium for Tuberculosis at Mount Vernon.

Dr. George Williams, of Odessa, has been appointed superintendent of the State Hospital at Fulton and the following physicians appointed as his assistants: Drs. D. E. Singleton, of Shelbina; R. S. Magee, of Green City; R. W. Wiseman, of Maywood.

Dr. William Seaman Bainbridge will give the fifth annual lecture on malignant disease, with presentation of patients, in the out-patient hall of the New York Skin and Cancer Hospital, May 19th. The lecture will be free to the medical profession.

A Special meeting of Pettis County Medical Society was held in Sedalia, on April 16th, to devise ways and means for the establishment of a general hospital.

The Conviction of James Austin Larson in St. Louis for practicing medicine without a license is a splendid victory for the St. Louis Health Department in its effort to prevent unlicensed persons from practicing medicine in St. Louis. Larson advertised in the daily papers that he was able to cure diseases through a system which he called the "telconi" method. The health department immediately began a crusade against him, and after repeated arrests, succeeded in having the case brought to trial and secured a verdict of guilty, the jury assessing a fine of $250.00.

Major Charles Lynch, of the United States Medical Corps, was the guest of the Kansas City Academy of Medicine on April 13th, and delivered a lecture illustrated by numerous stereoscopic views. Major

Lynch was sent by the United States as a medical observer in the Japanese army and was with the army during the war.

THE TEMPORARY injunction restraining the State Board of Health from proceeding with the trial of Drs. Geo. Schmidt and J. A. Hughson, of Kansas City, for revocation of their licenses, was dissolved by the court and the trial proceeded with. The licenses were revoked.

HARRISON WEBER, who was convicted and heavily fined for the illegal sale of cocaine while in the employ of the Meyers Medical Company, of Kansas City, was pardoned by the pardoning board. Weber was the principal witness in the trial of Drs. Geo. Schmidt and J. A. Hughson, furnishing the most of the testimony that resulted in their conviction.

THE ALUMNI Association of the Missouri Medical College will hold its annual meeting and banquet at Jefferson City, Wednesday evening, May 19th, during the meeting of the State Medical Association.

All graduates of the Missouri Medical College, in the State, are urgently requested to attend, and enjoy the social and festive pleasures of the meeting.

All who expect to attend will kindly mail their name and address, with a remittance of $1.50, to Dr. T. A. Coffelt, secretary, Springfield, Mo., not later than May the 8th, in order that arrangements can be made for the banquet.

DR. H. J. BOLDT, of New York, and Dr. C. B. Hardin, of Kansas City, president of the Medical Society of the Missouri Valley, were the guests of honor on Wednesday evening, March 17, at the Robidoux, when the Academy of Medicine gave its first annual dinner. The tables were placed in the private banquet hall, and were beautifully decorated with cut flowers and palms. Covers were laid for thirty-five, Dr. O. B. Campbell presiding. After disposing of a ten-course menu, the guests listened to an interesting paper by Dr. W. T. Elam on "The Present Status of Ureteral Surgery," which was discussed by Dr. Boldt, after which an informal reception was held and Drs. Boldt and Hardin were given an opportunity to meet the fellows of the Academy.

FOR TWO WEEKS, beginning Monday, May 24, and ending Saturday, June 5, special clinics and other exercises will be offered free of charge to alumni of Washington University and to all other physicians who may desire to attend.

Those wishing to attend these clinics are requested to register at the Dean's office, 1806 Locust street, which is within five minutes' walk

of the Union Station. All information, and tickets for the limited clinics, will be furnished there.

The annual banquet of the Alumni Association will be held Wednesday, May 26, in one of the St. Louis hotels. Special efforts will be made to have reunions of the classes of 1899, 1894, 1889, 1879 and 1869, both of the St. Louis Medical College and of the Missouri Medical College. It is hoped that other classes may follow their lead and make this banquet a memorable occasion.

DELEGATES to the American Medical Association this year will have the pleasure of a trip on special train over the picturesque "Big Four and C. & O." route through the resort region of the Virginias, and an opportunity of visiting Hot Springs, the most aristocratic of the old Southern resorts.

The "Missouri Valley and Southwest Special" will be composed of the finest Pullman palace sleeping and dining cars, observation and library car, and will run solid through to Atlantic City without change. The train will leave St. Louis on Saturday, June 5th, at noon, over the Big Four-C. & O. railways via Indianapolis, Cincinnati and Washington.

We will spend Sunday at Hot Springs, Va., a beautiful resort in the Allegheny mountains where our entire party will be the guests at luncheon of Mr. Fred Sterry, manager of the famous "Homestead" hotel. The day will be spent in sight-seeing. Leave Hot Springs 5 p. m., arriving at Atlantic City on Monday morning, June 7th, in ample time to register and attend the House of Delegates and auxiliary meetings before the opening of the American Medical Association on Tuesday.

The Central and Western Passenger Associations have announced a round-trip rate of one and one-half fare; from St. Louis $33.40; from St. Joseph, Kansas City and Omaha, $41.65.

A special car will leave Omaha on the evening of June 4th, at 6:30 o'clock, via the "Wabash." From Kansas City and St. Joseph the service will be via the "Missouri Pacific," leaving St. Joseph at 7:40 o'clock p. m. and Kansas City at 11:00 o'clock, p. m., same evening, arriving at St. Louis early next morning, allowing about four hours in the city.

The Grand Atlantic Hotel has again been chosen headquarters of the Medical Society of the Missouri Valley and Medical Association of the Southwest, Mr. Cope having "made good" in 1907. This excellent house was chosen on account of its proximity to the "Boardwalk," Steel Pier, Postoffice, Exhibit, Registration Bureau and other meeting places of the Association. Rates, $2.50, and up, per day, American plan.

State, County and District societies are cordially invited to join our party. Let us make the attendance at the A. M. A. from the West this year a record-breaker. For itinerary and reservations, address DR. CHAS. WOOD FASSETT, Secretary, St. Joseph, Mo.

Fifty-Second Annual Meeting

MISSOURI STATE MEDICAL ASSOCIATION

Jefferson City, May 18, 19 and 20, 1909

OFFICERS, 1908-9

PRESIDENT.

A. R. Kieffer, M. D. ..... St. Louis

VICE PRESIDENTS.

D. B. Farnsworth, M. D. ..... Springfield
W. J. Frick, M. D. ..... Kansas City
J. B. Norman, M. D. ..... California
C. H. Dixon, M. D. ..... Holliday
M. A. Smith, M. D. ..... Gallatin

SECRETARY.

A. W. McAlester, Jr., M. D. ..... Kansas City

TREASURER.

J. Franklin Welch, M. D. ..... Salisbury

MEDICAL SECTION.

Chairman: E. E. Gilmore, M. D. ..... Adrian
Secretary: W. R. Patterson, M. D. ..... Tipton

SURGICAL SECTION.

Chairman: Paul Y. Tupper, M. D. ..... St. Louis
Secretary: Willard Bartlett, M. D. ..... St. Louis

EYE, EAR, NOSE AND THROAT SECTION.

Chairman: J. H. Thompson, M. D. ..... Kansas City
Secretary: T. McLemore, M. D. ..... St. Louis

ORATORS.

Oration on Medicine: R. H. Goodier, M. D. ..... Hannibal
Oration on Surgery: F. J. Lutz, M. D. ..... St. Louis

COMMITTEES

ARRANGEMENT COMMITTEE.

Members of Cole County Medical Society.

COMMITTEE ON SCIENTIFIC WORK.

Paul Y. Tupper, M. D
E. E. Gilmore, M. D.
J. H. Thompson, M. D.
Willard Bartlett, M. D.
W. R. Patterson, M. D.
T. McLemore, M. D.

PUBLICATION COMMITTEE.

W. B. Dorsett, M. D., Chairman.
M. B. Clopton, M. D.
M. C. Shelton, M. D.

COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

H. E. Pearse, M. D., Chairman.
R. M. Funkhouser, M. D.
F. R. Newberry, M. D.

DEFENSE COMMITTEE.

F. J. Lutz, M. D., Chairman.
W. B. Dorsett, M. D.
Joseph Grindon, M. D.

COMMITTEE ON MEDICAL EDUCATION.

B. M. Hypes, M. D., Chairman.
C. M. Jackson, M. D.
O. B. Campbell, M. D.

COMMITTEE ON TUBERCULOSIS.

E. W. Schauffleur, M. D., Chairman.
George Homan, M. D.
W. E. McKinley, M. D.
J. R. Lemen, M. D.
J. R. Boyd, M. D.

PROGRAM

GENERAL SESSIONS

House of Representatives

TUESDAY, MAY 18—7:30 P. M.

Address of President.....A. R. KIEFFER, M. D., St. Louis
Oration on Medicine.....R. H. GOODIER, M. D., Hannibal
Oration on Surgery.....FRANK J. LUTZ, M. D., St. Louis

House of Representatives

WEDNESDAY, MAY 19TH—8:00 P. M.

Public meeting to hear address of Dr. J. N. McCormack, National Organizer for the American Medical Association.

House of Representatives

THURSDAY, MAY 20TH—9:00 A. M.

Election of President.
Election of Orator on Medicine.
Election of Orator on Surgery.
Selection of place of next meeting.

PROGRAM

FIRST DAY—TUESDAY, MAY 18TH.

House of Delegates called to order at 9:30 a. m.
Judicial Council called to order at call of Chairman.
Roll call.
Reading of minutes of previous meeting.
Reading of President's message and recommendations.
Report of Committee on Arrangements.
Report of Committee on Medical Education.
Report of Committee on Scientific Work.
Report of Committee on Public Policy and Legislation.
Report of Publication Committee.
Report of Special Committees.
Report of Treasurer.
Report of Secretary.
Appointment of Committee on Nominations.
Election of Delegates to American Medical Association. (Two to elect to serve two years.)
Proposed amendments to the Constitution and By-Laws.
Reading of Resolutions, Memorials, etc.
Miscellaneous business.

Report of Councilors

1st District.....C. L. Evans, Oregon
2nd District.....W. T. Elam, St. Joseph
3rd District.....G. W. Whitely, Albany
4th District.....C. R. Buren, Princeton
5th District.....E. E. Parrish, Memphis
6th District.....H. Jurgens, Edina
7th District.....L. W. Dallas, Hunnewell
8th District.....W. B. Dorsett, St. Louis
9th District.....A. R. McComas, Sturgeon
10th District.....C. W. Reagon, Macon
11th District.....J. D. Brummall, Salisbury
12th District.....E. H. Miller, Liberty
13th District.....F. E. Murphy, Kansas City
14th District.....C. T. Ryland, Lexington
15th District.....M. P. Overholser, Harrisonville
16th District.....J. R. Buchanan, Nevada
17th District.....R. D. Haire, Clinton
18th District.....Frank DeVilbiss, Eugene
19th District.....G. Ettmueller, Jefferson City
20th District.....F. J. Lutz, St. Louis
21st District.....G. M. Rutledge, Ste. Genevieve
22nd District.....F. R. Newberry, Fredericktown
23rd District.....T. C. Allen, Bernie
24th District.....T. W. Cotton, Van Buren
25th District.....Frank Harrison, Farmington
26th District.....R. L. Johnson, Rolla
27th District.....H. C. Shuttee, West Plains
28th District.....T. A. Coffelt, Springfield
29th District.....A. R. Snyder, Joplin

MEDICAL SECTION

House of Representatives

SECOND DAY—WEDNESDAY, MAY 19, 1909.

MORNING SESSION—9:00 O'CLOCK.

1. The New Standard of Diet with Reference to Health and Disease.....I. J. Wolf, M. D., Kansas City
2. Acute Pulmonary Edema, With Report of Cases..... .....James Q. Chambers, M. D., Kansas City
3. Tuberculosis as the General Practitioner Sees It..... .....O. H. Brown, M. D., Mount Vernon
4. Serum Diagnosis of Syphilis..John W. Marchildon, M. D., St. Louis
5. The Value of a State Laboratory..Guthrie McConnell, M. D., St. Louis
6. The Etiology and Prevention of Typhoid Fever..... .....Edward Schoor, M. D., Garden City
7. Fractures; General Considerations....A. J. Campbell, M. D., Sedalia
8. Emergency Surgery in the Country..J. B. Norman, M. D., California
9. The Diagnostic Value of the Systolic Murmur at the Apex of the Heart.....Frederick W. Froehling, M. D., Kansas City

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SECOND DAY—WEDNESDAY, MAY 19, 1909.

AFTERNOON SESSION—1:30 O'CLOCK.

10. Aneurysm of the Thoracic Aorta..... .....Wm. Engelbach, M. D., St. Louis
11. Nine Cases of Cerebro-Spinal Meningitis Treated With Flexner's Serum.....D. L. Harris, M. D., St. Louis
12. Scientific Employment of Drugs.....W. R. Patterson, M. D., Tipton
13. Progress in Medicine and Surgery..... .....C. O. Dewey, M. D., Breckenridge
14. The Relation of the Physician and Surgeon in Appendicitis Cases.....A. B. Miller, M. D., Macon
15. The Doctor as a Witness.....John Ashley, M. D., Bloomfield
16. The Physician as an Expert on the Psychopathies..... .....C. H. Hughes, M. D., St. Louis
17. The Physician; His Duty and Obligation Toward the Advancement of the Medical Profession.....J. S. Newlon, M. D. ,Butler
18. Verrucae Plantares et Palmares..... .....J. Phillip Kanoky, M. D., Kansas City

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THIRD DAY—THURSDAY, MAY 20, 1909.

MORNING SESSION—9:00 O'CLOCK.

19. Diabetes Mellitus.....W. H. Garrison, M. D., Eight Mile
20. The Treatment of Diabetes Mellitus..... .....Franklin E. Murphy, M. D., Kansas City

21. Dermatitis Exfoliativa Neonatal; Report of Case.....
.....J. C. Matthews, M. D., Springfield
22. Etiology and Treatment of Eclampsia..A. L. Gray, M. D., St. Joseph
23. The Physiology and Management of the Puerperium.....
.....E. A. Hoefer, M. D., Higginsville
24. Ectopic Pregnancy.....J. W. Marsh, M. D., Tipton
25. Cretinism; With Report of Case.....
.....J. Nelson Barger, M. D., Albany
26. Catarrh of the Middle Ear.....G. E. Gwinn, M. D., Bethany
27. Diphtheria; With Report of Case.....B. B. Barr, M. D., Clinton

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THIRD DAY—THURSDAY, MAY 20, 1909.

AFTERNOON SESSION—1:30 O'CLOCK.

28. Malarial Infection in Children....Scott P. Child, M. D., Kansas City
29. Obesity.....W. K. Statler, M. D., Oak Ridge
30. Solidified Carbon Dioxid as a Topical Agent.....
.....Joseph Grindon, M. D., St. Louis
31. Traumatic Eye Lesions and No Specialist.....
.....W. F. Chaffin, M. D., Raymore
32. Corneal Ulcers and Their Treatment.....S. G. Kelly, M. D., Sedalia
33. A Review of the Treatment of Epilepsy in General Practice.
.....E. C. Callison, M. D., Kirksville
34. The Use of Bismuth Vaseline Paste; Report of Cases.....
.....T. F. Frazer, M. D., Commerce

SURGICAL SECTION

Senate Chamber

SECOND DAY—WEDNESDAY, MAY 19, 1909.

MORNING SESSION—9:00 O'CLOCK.

1. Dr. Adam Hammer, Surgeon and Apostle of Higher Medical Education.....James Moores Ball, M. D., St. Louis
2. Problems and Possibilities of a Country Practitioner From a Surgical Standpoint.....T. F. Lockwood, M. D., Butler
3. Some Diagnostic Points.....J. H. Morroway, Ridgeway
4. Anesthesia.....W. E. Leighton, M. D., St. Louis
5. Some Late Effects of Chloroform..Wm. E. Stevens, M. D., Kansas City
6. A Study of the Action of Scopolamine-Morphine on the Heart, Liver and Kidneys, With a Report of Six Hundred and Fifty Cases of Scopolamine-Morphine Administered as a Preliminary to General Anesthesia.....C. M. Nicholson, M. D., St. Louis
7. The Physiology of Shock.....M. G. Seelig, M. D., St. Louis
8. Internal or Direct Splint in the Treatment of Fractures.....
.....Herman E. Pearse, M. D., Kansas City
9. Fractures of the Neck of the Femur..J. H. Tanquary, M. D., St. Louis

10. Compound Fractures and Remote Effects Under Prevailing Treatment.....G. Wiley Broome, M. D., St. Louis
11. Report of a Case of Osteosarcoma.....C. W. Watts, M. D., Fayette
12. The Proper Age at Which to Operate for Clefts of the Hard Palate.....Vilray Papin Blair, M. D., St. Louis

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SECOND DAY—WEDNESDAY, MAY 19, 1909.

AFTERNOON SESSION, 1:00 O'CLOCK.

13. Remarks on Tumors of the Parotid Gland.....Francis Reder, M. D., St. Louis
14. Exophthalmic Goitre.....H. Tuholske, M. D., St. Louis
15. The Treatment of Parenchymatous and Exophthalmic Goitres.....Edward G. Blair, M. D., Kansas City
16. Report of Two Cases of Injury to the Heart.....Louis Rassieur, M. D., St. Louis
17. Cancer of the Stomach.....C. R. Dudley, M. D., Hannibal
18. Regurgitant Vomiting, Due to Unusual Adhesions, Following Gastro-Enterostomy with Pyloric Exclusion.....Max W. Myer, M. D., St. Louis
19. Surgical Dyspepsia.....Fritz J. Moennighoff, M. D., Kansas City
20. Remote Effects of Abdominal Injuries.....Robert E. Schleuter, M. D., St. Louis
21. Surgical Technique.....J. M. Frankenberger, M. D., Kansas City
22. Practical Points in Abdominal Surgery..C. C. Morris, M. D., St. Louis
23. Abdominal Incision.....Pinckney French, M. D., St. Louis

THIRD DAY—THURSDAY, MAY 20, 1909.

MORNING SESSION—9:00 O'CLOCK.

24. "Stunts" in Surgery.....Wm. S. Deutsch, M. D., St. Louis
25. Personal Experiences with Abscess of the Liver.....H. S. McKay, M. D., St. Louis
26. Some Remarks Regarding Gall Bladder Disease.....Robt. M. Funkhouser, M. D., St. Louis
27. A Case of Congenital Absence of Gall Bladder in Which Appendicitis Produced the Symptoms of Gall Stone Disease.....G. W. Cale, Jr., M. D., St. Louis
28. Tuberculous Omental Mass Simulating Gall Bladder Disease, With Report of Cases.....Gordon A. Beedle, M. D., Kansas City
29. Similarity of Symptoms in Certain Cases of Chronic Appendicitis and Calculus of the Right Ureter: Report of Case with Plea for Careful Analytical Diagnosis.....Jno. Young Brown, M. D., St. Louis
30. A Critical Review of a Series of Appendix Cases.....Luther A. Todd, M. D., St. Joseph
31. Surgical Treatment of Amebic Dysentery by Appendicostomy.....Rodney J. Bunch, M. D., St. Louis
32. The Gynecologist of To-day.....Walter B. Dorsett, M. D., St. Louis
33. The Causes of Amenorrhœa.....George Gellhorn, M. D., St. Louis
34. Ectopic Gestation Symptoms in Gonorrhœal Salpingitis Cases.....H. S. Crossen, M. D., St. Louis

THIRD DAY—THURSDAY, MAY 20, 1909.

AFTERNOON SESSION—1:00 O'CLOCK.

35. Dysmenorrhœa.....Jno. McH. Dean, M. D., St. Louis
36. Ovarian Tumor Complicating Pregnancy, with Recovery After Operation.....Davis Forster, M. D., St. Louis
37. Intestinal Obstruction; With Special Reference to Paresis of the Bowels.....T. E. Potter, M. D., St. Joseph
38. Illustrative Cases of Intestinal Obstruction; With Remarks on Diagnosis and Treatment..Walter C. G. Kirchner, M. D., St. Louis
39. Membranous Pericolitis.....Jabez N. Jackson, M. D., Kansas City
40. Chronic Colitis.....W. J. McGill, M. D., St. Joseph
41. Excision of Lower Part of Rectum; Report of Case.....W. H. Coffey, M. D., Kansas City
42. Modern Methods in the Surgical Treatment of Rectal Diseases.....J. S. Wallace, M. D., Brunswick
43. The Immediate Suture Operation in Fistula in Ano; With Report of Cases.....E. H. Thrailkill, M. D., Kansas City
44. Unilateral Suppurative Infection of the Kidney.....Charles Hodge Wallace, M. D., St. Joseph
45. Cystoscopy; Its Practical Results.....H. J. Scherck, M. D., St. Louis

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THIRD DAY—THURSDAY, MAY 20, 1909.

EVENING SESSION—8:00 O'CLOCK.

46. Bladder Stone; Its Diagnosis and Treatment.....Ernest G. Mark, M. D., Kansas City
47. Neoplasm of the Testicle.....A. H. Cordier, M. D., Kansas City
48. Undescended Testicle and Malignant Degeneration.....Ernst Jonas, M. D., St. Louis
49. Radical Operation for Hernia; as Seen by the Country Surgeon.....C. H. Suddarth, M. D., Smithville
50. Report of a Case of Shoulder-Joint Amputation, with Peculiar Sequelæ.....B. Clark Hyde, M. D., Kansas City
51. Modern Ideas of Chronic Rheumatism.....Archer O'Rielly, M. D., St. Louis
52. The Open Method of Treating Infected Joints; with Report of Case.....John D. Seba, M. D., Bland
53. Skin Stretching; with History of Cases.....J. H. Roney, M. D., Lawson

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EYE, EAR, NOSE AND THROAT SECTION

Committee Room

SECOND DAY—WEDNESDAY, MAY 19, 1909.

MORNING SESSION—9:00 O'CLOCK.

1. Ocular and Aural Prophylaxis.....P. I. Leonard, M. D., St. Joseph
2. The Prevention of Ear Disease.....Hal Foster, M. D., Kansas City

3. Our Overstocked Instrument Case: A Plea for Operative Simplicity in Oto-Laryngology....Fayette C. Ewing, M. D., St. Louis
4. Adenoids.....John C. Faris, M. D., Pemiscot
5. Penetrating Wounds of the Eyeball.....Llewellyn Williamson, M. D., St. Louis
6. Nasal Obstruction: Some of Its Causes, Effects and Treatment.....H. G. Savage, M. D., Warsaw
7. Nasal Obstructions as a Causative Factor in Diseases of Ear and Throat.....D. C. Adcock, M. D., Warrensburg

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SECOND DAY—WEDNESDAY, MAY 19, 1909.

AFTERNOON SESSION—1:30 O'CLOCK.

8. Some Observations on Cause and Effect in Diseases of the Eye and Ear.....F. L. Anderson, M. D., Nevada
9. The Art of Refraction.....John Green, Jr., M. D., St. Louis
10. Report of An Accidental Opening of Lateral Sinus.....Eugene Sesensey, M. D., St. Louis
11. Ocular Diseases Due to Systemic Influences.....W. H. Minton, M. D., St. Joseph
12. Labyrinthine Affections.....C. F. Pfingsten, M. D., St. Louis
13. The Cross-Eyed.....Ernst Saxl, M. D., St. Louis
14. Reflex Disturbances of Hypertrophied Turbinates.....C. A. Moore, M. D., Springfield

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THIRD DAY—THURSDAY, MAY 20, 1909.

MORNING SESSION—9:00 O'CLOCK.

15. Lantern Demonstration of Anatomy and Pathology of the Accessory Sinuses.....Max Goldstein, M. D., St. Louis
16. Seclusion and Occlusion of the Pupil with Absorption of Exudate After Period of Thirty-five Years.....W. B. Post, M. D., Carthage
17. Inspection of School Children with Special Reference to the Ear, Nose and Throat.....Charles Wyche, M. D., St. Louis
18. Irido-Cyclitis.....Theodore A. Coffelt, M. D., Springfield
19. My Operation for the Extirpation of the Lachrymal Sac.....C. Barck, M. D., St. Louis
20. Otitic Sinus Phlebitis and Thrombosis; With Report of a Case of Phlebitis and Thrombosis of Lateral Sinus and Jugular Vein.....Wm. E. Sauer, M. D., St. Louis
21. Ocular Examination as an Aid in the Prognosis of Otitis Media Suppurativa.....W. Emil Klokke, M. D., St. Louis

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THIRD DAY—THURSDAY, MAY 20, 1909.

AFTERNOON SESSION—1:30 O'CLOCK.

22. Methods of Teaching in Otology....Seldon Spenser, M. D., St. Louis
23. Glaucoma.....Flavel B. Tiffany, M. D., Kansas City
24. Accidental Removal of the Stapes.....F. C. Simon, M. D., St. Louis
25. Osteoma of the Choroid.....W. H. Schultz, M. D., Kansas City

26. The Free Clinic Affiliated With the College and Its Poor System in St. Louis.....E. H. Higbee, M. D., St. Louis
27. Ophthalmological Experiences.....Barton Pitts, M. D., St. Joseph
28. Interesting Problems in Ear, Nose and Throat Practice..... .....Robert Barclay, M. D., St. Louis

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MISSOURI SOCIETY OF MEDICAL SECRETARIES

Madison Hotel Parlors

TUESDAY, MAY 18TH—4:00 P. M.

1. The Missouri State Medical Association: What it Should Mean to Missouri Doctors.....By Dr. Tinsley Brown, Hamilton
   Discussion opened by Dr. W. B. Dorsett.
2. What it Should Mean to the State at Large..... .....By Dr. E. C. Grim, Kirksville
   Discussion opened by Dr. M. F. Overholser.
3. Scientific Work in County Societies..By Dr. F. H. Matthews, Liberty
   Discussion opened by Dr. W. T. Elam.
4. The Social Side of the County Organization..... .....By Dr. H. S. Major, Hardin
   Discussion opened by Dr. S. V. Bedford.
5. The Secretary's Work from a Business Standpoint..... .....By Dr. E. N. Chastain, Butler
   Discussion opened by Dr. Carroll Smith.
6. How to Interest the Eligible Non-Members in County Society Work and How to Get a Good Attendance at the Meetings.... .....By Dr. A. H. Thornburg, West Plains
   Discussion opened by Dr. J. F. Chandler.
7. The State Journal: What It Should Mean to the Individual Members.....By Dr. L. W. Dallas, Hunnewell
   Discussion opened by Dr. J. R. Buchanan.
8. What the County Secretary Can Do to Make the State Journal a More Forceful Element in Medical Organization..... .....By Dr. E. J. Goodwin, St. Louis
   Discussion opened by Dr. E. H. Miller.
9. Prosecution of Irregulars: The Experience of a County Secretary.....By Dr. M. A. Smith, Gallatin
   Discussion opened by Dr. A. M. Wood.
10. Address: The Missouri Society of Medical Secretaries: Its Objects and Its Possibilities..... .....By Dr. J. N. McCormack, National Organizer

CORRESPONDENCE

To the Editor:

Herewith I hand you a copy of "Standing Orders for Nurses," adopted by the St. Louis Maternity Hospital, and request that you publish it in the Journal, as I believe the information may prove interesting to the members of the profession throughout the State.

Yours truly,

Davis Forster, M. D.

STANDING ORDERS FOR NURSES.

CONFINEMENT WARDS.

When patient in waiting ward or private rooms reports that pains have begun, the nurse of the delivery room takes charge of her.

1. Give warm tub bath.
2. Give enema of soapsuds, 1 to 2 pints.
3. Shave or clip vulval hair.
4. Scrub external genitalia, and patient from ribs to knees.
5. Rinse same parts with 1-2000 sol. bichloride.
6. Cover with sterile pad. (The patient must use bedpan and never toilet after once prepared.)

Put patient to bed in confinement room or if confinement bed is in use put in confinement ward.

The nurse prepares:

1. The delivery bed.
2. Tables for basins containing antiseptic solutions.
3. Jars with dressings.
4. Douche stand.
5. Rubber gloves for examination and for delivery.

DUTIES OF NURSE DURING FIRST STAGE OF LABOR.

After emptying bowel and bladder, patient having had vulva shaved, parts cleansed and covered with sterile pads, nurse arranges clothing of patient as comfortably as possible. No solid food is taken after onset of labor. Soups, broths, coffee or tea, milk and an abundance of water may be taken, as they leave no residue in stomach and do not interfere with the anesthetic.

Let the nurse have ready:

a. Blanket with sterile towel inside.
b. Ligature for cord.
c. Scissors and artery forceps.
d. Sterile hypodermic needles.
e. Strychnine sulphate, 1-30 gr.
f. Ergot aseptic.

INSTRUMENTS FOR REPAIR OF PERINEUM AND CERVIX.

a. Curved needles.
b. Needle holder.
c. Hemostatic forceps.
d. Silkworm gut.
e. Ten day No. 2 chromicized catgut.

If patient is a primipara during the early stage she may be up and about; this favors the descent of the child. When pains occur she may lie down or sit leaning forward and grasp a chair in front of her for support. As the pains increase in severity, patient will be forced to lie down.

If patient is a multipara she cannot be about so long lest a precipitate birth occur. Patient may lie on back or left side, head and shoulders raised, thighs flexed on body. Where the pains are simply nagging, not increasing steadily in vigor, the nurse should report this fact to the interne.

As the first stage of labor draws to a close, let the nurse see to the supply of (1) hot water, (2) stimulants, (3) aseptic dressings, (4) utensils, and (5) clothing for the child and all necessities.

After the membranes rupture a sterile pad must be placed over the vulva.

DUTIES OF NURSE DURING SECOND STAGE OF LABOR.

Antiseptic solutions, lysol, ½% and bichloride 1-2000 must be in constant readiness for cleansing of physician's hands and the external parts of patient for examination.

Nurse to have all articles in readiness and assist patient to sustain her strength. Pain in the lower part of back may be relieved by a hot pack or support by pressure.

The moment the child is born, the nurse will receive it in a sterile towel placed within a small blanket, which has been warmed.

The ligature, scissors, and one pair of hemostatic forceps are in readiness for the physician to tie the cord.

DUTIES OF NURSE DURING THE THIRD STAGE.

Have a plentiful supply of hot water.

a. Two quarts of hot antiseptic solution.
b. Aseptic dressings.
c. Hypodermic needles, sterile.
d. Fld. ext. ergot.
e. Hypodermic tablets of strychnine sulphate, 1-30 gr.
f. Ergot aseptic (which in case of post-partem hemorrhage is to be injected deep into gluteal muscles).

Have a basin in which a towel has been placed (to receive the placenta) in readiness and place under thigh to receive it when delivered along with the clots that may be found in the vagina.

Give one drachm of the fld. ext. ergot when the placenta has been delivered, and any other stimulant ordered by the physician, who is examining for lacerations.

If no lacerations are present, the parts are cleansed by sponging away blood and discharges with a bichloride solution 1-2000. An aseptic dressing is then applied and attached to binder.

If there is danger of hemorrhage, the binder is not applied. The nurse must be sure that the uterus is well contracted, hard and firm.

To apply binder properly, it should be fastened from above downward.

The uterus is brought down and forward against the brim of the pelvis.

Patient is returned to bed in confinement ward where nurse is in constant attendance for one hour watching contraction of uterus.

Patient to remain on back for eight hours, then to move from side to side at will.

Patient to remain in bed for ten days if there is no laceration.

If laceration of perineum is present, it is repaired at once with continuous catgut sutures and silkworm gut tension sutures.

Tension sutures to be removed in 10 to 15 days and patient kept in bed 21 days.

On eighth day, if no perineal laceration be present, prepare patient for physician to examine her for cervical lacerations. If he reports lacerations present, prepare instruments and catgut for repair of cervix

Instruments:

2 vulselli.

1 knife.

Scissors. 1 pair straight, 1 pair curved.

6 hemostatic forceps.

Short curved needles.

Needle holder.

Ten day chromicized catgut No. 2.

MOTHER'S DIET.

Give not over 2 quarts fluids in 24 hours,—milk, gruel, soup, cereals, coffee, cocoa only, for the first three days.

After the third day, if bowels have moved, add to diet, bread, toast, cooked cereals, eggs, vegetables. Light desserts, as corn starch, gelatin, tapioca, with stewed fruit, as apples, prunes, apricots. Meat in small quantities after bowels have moved thoroughly.

LAXATIVES.

Give castor oil, one-half ounce, at end of 48 hours. Enema if bowels fail to move 6 hours. Repeat enema if needed next day.

Report failure of regular bowel movement to house interne.

If urine is not voided six hours after delivery, report to interne.

CARE OF BABIES.

When baby is born let nurse have ready sterile towel and warm blanket in which baby is wrapped and left between mother's thighs, lying on right side.

Face of infant is douched with sterile water and eyes and mouth sponged with sterile pads.

Mucus is removed from respiratory canal.

When cord has ceased pulsation, nurse has ready:

1. Sterile tape.
2. Scissors.
3. Artery clamps.

After cord is severed and tied, nurse sponges cut end with alcohol.

Child is wrapped warmly and laid aside in safe place while nurse assists further in care of mother.

Later infant is annointed with oil and nurse puts one drop of a 1% silver nitrate sol. in each eye.

Child is dressed and laid in quiet place until applied to mother's breast.

FEEDING OF CHILD.

Apply child to breast shortly after birth (within the first six hours, usually), and every six hours afterward, for the first day.

Second day. Every four hours.

Third day. Every three hours.

When there is an abundance of milk and the breasts become turgid and painful, the child is urged to nurse every two hours, for the mother's sake, until the breasts are relieved and for the child's sake if there has been a large initial loss in weight and it seems restless from hunger.

After a long initial delay of breast milk (two days or longer), child will have a lively appetite and cry noisily if not applied as often as every two hours. But after getting a reasonable quantity for 24 hours will remain away from mother longer and even sleep when offered breast.

Normal infants obtaining a reasonable amount of milk will take one long, uninterrupted sleep in 24 hours.

The nurse should train child to take this nap at night.

While not nursing, babies are to be kept in baby ward.

1424 E. Ravenswood Park, Chicago, Ill., March 10, 1909.

To the Editor:

I am collecting material for a paper upon atropine as a hemostatic. and would be obliged to any of your readers who would send me notes of their experience with this remedy. I am particularly anxious to receive adverse reports, as well as those favoring the remedy.

Thanking you for the courtesy of inserting this note, I remain.

Very sincerely yours,

William F. Waugh, M. D.

COUNTY SOCIETY NOTES

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The Cape Girardeau County Medical Society held its regular monthly meeting at Cape Girardeau, April 12th. Ten members and the following visitors were present: Dr. Nettles and our councilor, Dr. Newberry.

The application of Dr. Nettles was placed before the Society and upon the recommendation of Dr. Newberry, the doctor was received into the Society.

A committee was appointed to arrange for the Dr. McCormack meeting, May 31.

The scientific program for the evening consisted of the following papers: Histology and Pathology of Membranous Croup, by Dr. Yount; Symptomatology and Treatment of Membranous Croup, by Dr. Rosenthal; Spasmodic Croup, by Dr. Walker; Tonsillitis, by Dr. Moore. Dr. Rosenthal and Dr. Walker were not present to read their papers, but the two papers by Drs. Yount and Moore were much appreciated and created a very animated discussion of the conditions reported.—E. H. G. Wilson, M. D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY.

The Johnson County Medical Society met in regular session at Warrensburg, April 13th.

The scientific program of the evening consisted of a symposium on diseases of the kidneys, as follows: The Anatomy and Physiological Functions of the Kidneys, by Dr. Parker, of Warrensburg; Acute Inflammatory Diseases of the Kidneys and Treatment, by Dr. L. J. Schofield, of Warrensburg; Chronic Inflammatory Diseases of the Kidneys and Treatment, by Dr. J. I. Anderson, of Warrensburg.

Our retiring president, Dr. J. T. Anderson, delivered the following address at our March meeting:

I appreciate the honor which you have conferred upon me by electing me president of this Society. I consider it the highest office in our county. I shall endeavor to do all in my power to make this Society better this year than it has been in the past. I realize that this will be easier done as we are on a good working foundation, and that you are better fitted to assist than you ever were.

I desire to outline a few suggestions, which, if followed out, I believe will be a benefit to us:

First, I suggest that we put aside all professional jealousy and let us be as free from cliques and classes as possible. Let us have every-

thing out of our minds when we meet here save the good of this Society and the advancement of medical education in this country. Let us all come here for information and let everyone feel free to express his ideas.

Secondly, I think during the summer months we should meet monthly. If we maintain the proper enthusiasm necessary for a live medical society it is necessary for us to meet often.

Thirdly. Those who are placed upon the program for papers should by all means prepare their papers, and if professional duty should be so urgent as to keep them from attending the Society, send their papers to the secretary so they can be read and discussed. It is an insult to a body of doctors who honor a member by placing him on the program for a paper, to have him ignore them, draw himself up in his shell and not come nor send his paper; so let everyone who is placed upon the program this year go to work and prepare his paper and get it to the Society without fail.

Fourthly, I desire to suggest a change in the arrangement of papers. I don't think we are systematic enough to get the best results. I don't think we are scientific enough, either. Our papers are too promiscuous. I suggest that we take up an organ or organs, and that our scientific committee assign to the men chosen to write a symposium—one paper giving us the anatomy-physiology of the organ under study in a concise manner, but at the same time giving us a good outline of the same. Another paper dealing with pathology, including clinical history and the various means of diagnosis, and the third dealing with the various means of therapy. I would continue on an organ or organs until their diseases were gone through pretty thoroughly, and in connection with this symposium if we could get clinical material for demonstration it would be the better, of course.

I really have gotten more from the clinics here than any other source. I know that we could have more clinics than we have if every doctor would only try and bring his cases. Don't only bring the cases that you can't fathom, but bring the ones that you have studied out and know like your a. b. c.'s, so you are able to make an interesting demonstration to us concerning them. We need a blackboard here for drawing the thorax and abdomen and marking the sub-divisions of these cavities with the organs they contain. By thus arranging the papers in a systematic form, taking up the heart, for instance, and staying with it until it was thoroughly studied; then the stomach, putting in more time, of course, upon organs like the stomach and bowels and their diseases, which are so prevalent that all of us are constantly meeting them every week almost, we would be greatly benefited.

As I began to say, by arranging the papers thus, it would enable us to get more of the scientific part of medicine, which, to my judgment, this Society needs, situated as we are, away from the city—where we are all general practitioners, without medical teachers and other scientific men to vie with, or even hear—we are inclined to get careless and not do as well as we could.

Let us get busy and give the Society this year and from now on our best efforts. Let us make ourselves better able to benefit each other by careful study of a subject assigned to us. Do not get too long and tiresome, but give us truth garbed in a scientific suit cut just to fit an ordinary man.

MACON COUNTY MEDICAL SOCIETY.

The Macon County Medical Society met in regular monthly meeting at the office of Dr. A. B. Miller in Macon, Tuesday morning, April 13th. Members present were as follows: T. S. Watson, Bevier; George F. Brewington, Bevier; W. P. Rowland, Bevier; F. B. Dailey, Keota; P. R. Tainter, Callao; A. B. Miller, W. H. Miller, C. W. Reagan, L. M. Thompson. A special meeting of this Society has been arranged for May 11th, at Macon, at which time the discussion will be on the subject of appendicitis.

MARION COUNTY MEDICAL SOCIETY.

The Marion County Medical Society held its regular monthly meeting in Hannibal, Friday evening, April 2d.

Under interesting cases, Dr. Bounds presented the history of a typhoid fever patient who died suddenly during convalescence.

Dr. Hornback described a case of aphasia following a middle ear abscess.

Dr. Howell reported a case of secondary hemorrhage occurring four days after the removal of enlarged tonsils.

The paper of the evening was read by Dr. Winn, the subject being "Goitre from the Standpoint of the General Practitioner."

A committee composed of Dr. Goodier, Dr. Farrell and Dr. Banks was appointed to arrange for the lectures to be given by Dr. McCormack in the early part of May.—I. E. Hill, M. D., Reporter.

SCOTT COUNTY MEDICAL SOCIETY.

The Scott County Medical Society met at Benton, April 5th, 1909. Those present were Drs. T. F. and T. R. Frazer, W. H. Wescoat, J. A. Milem, U. P. Haw, J. A. Cline, C. M. Malcolm, G. S. Cannon, W. S. Hutton, W. E. Harris and R. S. McCabe.

The scientific program of the evening consisted of a report of a case of broncho-pneumonia by Dr. T. F. Frazer and a report of three cases of scarlet fever by Dr. Haw. Dr. Malcolm related a fatal case of hematemesis and Dr. Cline discussed the subject of superfetation.

The next meeting will be held at Benton the first Monday in July.—W. S. Hutton, M. D., Secretary.

STE. GENEVIEVE COUNTY MEDICAL SOCIETY.

The Ste. Genevieve County Medical Society held its regular monthly meeting April 14th.

Dr. C. C. Kerlagon's application for membership was voted on and he was unanimously elected a member.

No further business appearing, the Society adjourned until the second Wednesday in May, at 7:30 P. M.—R. W. Lanning, M. D., Secretary.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

MEETING OF WEDNESDAY EVENING, FEBRUARY 24TH.

Dr. Jacob Geiger, chairman of the Missouri Valley, submitted a brief report.

Dr. Daniel Morton, chairman of the entertainment committee, also made a report.

On motion of Dr. Leonard, Senate bills Nos. 149, 150 and 151, pending in the State Senate, were unanimously endorsed.

Dr. C. A. Good read a paper on "Acute Glandular Fever," which was discussed by Drs. Willman, Forgrave, Leonard, Morton, Woodson and Elam.

Dr. J. H. McCoy opened the discussion on "Tonsillitis," and he was followed by Drs. McKinley, Leonard, Willman and Gleaves.

MEETING, WEDNESDAY EVENING, MARCH 10TH.

Dr. J. W. Heddens presented a paper on "Hyperemia," which was discussed by Drs. McGlothlan, Leonard, Carpenter, Good, Campbell.

Upon motion, the thanks of the Society were extended to the officers of the St. Joseph Medical and Surgical Society for donation to the entertainment fund of the Missouri Valley committee.

The application of Dr. J. A. Hensler was read and referred to the censors.

Upon motion, it was decided to call a special meeting of the Society, in honor of Dr. Boldt, for the evening of March 16, at which time Dr. J. W. Heddens would present a paper on "Retrodisplacements of the Uterus."

SPECIAL MEETING, MARCH 16TH.

A special meeting of the Society was held on Tuesday evening, March 16, at the Robidoux, complimentary to Dr. H. J. Boldt, of New York. Dr. J. W. Heddens presented a paper on "Retrodisplacements of the Uterus," which was discussed by Drs. Boldt, Schmid, Wallace, Potter, Jacob Geiger, Campbell, Willman, and Geo. Nash, of Maryville. At the conclusion of the scientific program, the members repaired to the banquet table, where a Dutch lunch was served, and the remaining hours of the evening were spent in social intercourse.

MEETING OF WEDNESDAY EVENING, MARCH 24TH.

Dr. P. I. Leonard offered a motion that the Society go on record as being in favor of the law regarding Optometry remaining as it is, and opposed to the new House Bill No. 411, and that our representatives be so instructed. Carried.

Dr. T. H. Doyle offered a motion thanking the business men and profession of the city for their substantial aid in contributing to the entertainment fund of the Missouri Valley meeting. Carried.

Dr. P. I. Leonard offered a vote of thanks to the Missouri Valley committee for its efforts to make the meeting a success. Carried.

Dr. P. I. Leonard presented a paper on "Sudden Blindness," which was discussed by Drs. Pitts, Jacob Geiger, Renaud, Gleaves.

Dr. W. J. McGill opened the discussion on "Bacterial Vaccines in Gonorrhœa," and was followed by Drs. Paul, Chris, Sampson and Bansbach.—CHAS. WOOD FASSETT, M. D., Secretary.

ARTICLES APPROVED BY THE COUNCIL ON PHARMACY AND CHEMISTRY.

PHENOCOLL SALICYLATE.

Phenocoll salicylate, $C_6H_4.OC_2H_5.NH(CH_2NH_2.CO).C_6H_4.OH.COOH=C_{17}H_{20}O_5N_2$, is the salicylate of the synthetic base phenocoll (see phenocoll hydrochloride).

Actions and Uses.—It combines the therapeutic action of phenocoll (antipyretic, analgesic, see phenocoll hydrochloride) with those of salicylic acid (antiseptic, antirheumatic). It is recommended in rheumatism, gout, chorea, pleuritis and fevers, especially in influenza. Dosage.—1 to 2 Gm. (15 to 30 grains).

PEGNIN.

The milk-curdling enzyme of calf's rennet, diluted with sugar of milk and sodium chloride.

Actions and Uses.—Producing a finely divided coagulum, it obviates the formation of the clotty curds which are liable to be produced when untreated cow's milk is taken as food. Cow's milk coagulated with pegnin as described below is said to be particularly serviceable for infant feeding and well adapted as a food for adults in stomach affections and in disturbances of the digestion incident to infectious diseases, in hyperacidity, etc. Dosage.—8 to 10 Gm. (120 to 150 grains) of pegnin are required for 1 liter (34 fluidounces) of milk, previously boiled and cooled to about 40° C. (104° F.). The mixture, after a brief shaking, is allowed to stand 2 to 3 minutes or until it is completely coagulated, and then shaken vigorously during several minutes until the coagulum has been converted into a smooth, homogeneous mixture, and set aside in a cool place. It is transferred to the nursing bottle as required and heated in warm water to the body temperature (37.5° C., 99.5° F.) before feeding infants. Manufactured by Farbwerke, vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

PIPERAZINE.

Piperazine, $NH\begin{matrix}/CH_2.CH_2.\backslash\\ \backslash CH_2.CH_2./\end{matrix}NH=C_4H_{10}N_2$, is a synthetic base obtained by the condensation of two $.CH_2.CH_2.$ groups, with two $:NH$ groups.

Actions and Uses.—A part of the piperazine ingested passes undecomposed into the urine and is claimed by some to form a very soluble compound with the urinary uric acid; others state that the piperazine which is excreted is largely in combination with the stronger mineral acids. It has been shown that urine containing piperazine has no greater solvent power on uric acid than ordinary urine. It seems to produce no symptoms in man or animals, even when administered in fairly large quantities, although it is stated that, after large doses, tremors, clonic spasms and general depression have occurred. Piperazine has been recommended for the prevention of the formation of renal and vesical calculi and for the relief of irritation of the bladder due to excess of uric acid in the urine and in cases of chronic gout, rheumatism, renal colic, etc. The attempt to secure the solution of uric acid in the body by this as well as other remedies has not been successful in the experience of many clinicians. Dosage.—0.3 to 0.6 Gm. (5 to 10 grains); daily dose, 1 to 2 Gm. (15 to 30 grains). Owing to its hygroscopic character, it is impracticable to dispense it in powder; it should, therefore, be dispensed in solution in water, plain or carbonated, but in quantities sufficient for a day's supply only. Manufactured by Fabenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York). Also by Chemische Fabrik auf Actien vorm. E. Schering, Berlin (Schering & Glatz, New York).

JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

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ORIGINAL ARTICLES

THE STATE'S DUTY IN THE CONSERVATION OF PUBLIC HEALTH.*

By Guthrie McConnell, M. D., of St. Louis, Mo.

The state boards of health as they now exist in this country are the outgrowths of the increase in the population and the advancements made in the education of the community at large.

In the early days when population was scanty, the people living in very small communities, widely scattered, there was little need of a board of health. The families were not exposed to contagion, and even if contagious diseases did occur the rest of the people could easily avoid the dangerous locality. When, however, people came together in larger numbers and in more numerous areas, a new danger was introduced. It was then no longer so easy a matter to avoid contact with one's neighbors and some means of protecting the public had to be devised. Each locality was able to make and enforce its own laws in regard to its own protection. Public opinion was sufficiently strong to accomplish this.

There finally came a time when it was no longer sufficient to protect against immediate neighbors. Some method had to be found to guard against the importation of infectious diseases from more distant points. As transportation facilities increased this question became more and more important until the local officers were unable to cope with the situation.

It is at about this period that state boards of health were introduced. The people of the state realized that as a matter of self-protection it was necessary to have some person or persons given the authority to control

*Read before the Southeast Medical Association, Jackson, Mo., Oct. 21, 1908.

the matter of the public health. Although the management of infectious diseases was probably the primary cause of the formation of those boards, their duties have long since progressed far beyond such narrow limitations. To pass from the prevention of the spread of disease to the control of the qualifications of those wishing to practice medicine, is not difficult.

It is not enough that a few men should be able correctly to diagnose and manage such diseases. The public health requires that those men who are to look after the sick should possess sufficient knowledge to prevent the exposure of the community. To bring this about necessitated the empowering of the board of health to make such rules and regulations as seem necessary to insure that none but well qualified men should practice medicine.

It is again but an easy step to pass on to the control of many things that deal more or less directly with the health of the community. In some of the western states the matter of the pollution of streams of water used for drinking purposes is not so serious as in the east where the population is so much greater. But it may become a matter of seriousness, as was the case of St. Louis in relation to the Chicago drainage canal.

Pure foods are also subjects of direct importance. The people cannot remain healthy if the foods that they eat contain deleterious materials. This has, however, become so extensive as to necessitate the establishment of a separate set of machinery.

The chief duties therefore of a State Board of Health may be divided into two main groups: The prevention of the spreading of diseases already within the confines of the state, and, secondly, the protection of the people from infection from the introduction of diseases from outside sources.

The second of the two will be considered first even if it in a way does not seem quite as important as the other. It is very evident that this is a matter of varying importance according to the situation of the state. In the west there is comparatively little danger from immigration, while those states situated on the oceans are constantly threatened. New York with its hosts from Europe; New Orleans with the spectre of tropical diseases, such as yellow fever; and San Francisco with that disease of Oriental filth, bubonic plague, have to be ever on the watch. The latter city unfortunately, as a result of political intrigue, has allowed the plague to become endemic within its confines. That necessitates a constant guard being maintained by other states lest an epidemic arise.

St. Louis must also be on the lookout lest yellow fever should gain lodgement, as the necessary mosquito, the Stegomyia, exists in sufficient numbers to be distinctly dangerous if a focus of the disease should develop.

In many states the question of the entrance of consumptives has reached a very serious stage, so much so that Texas for instance will not allow a tubercular non-resident to remain within its borders.

Small-pox is another of the invading hosts, but we are better able to cope with it and with diphtheria than with other diseases. Vaccination as a preventive in the one, and antitoxin as a curative in the second, have materially lessened the danger of such infections. The pock-marked man is now the exception instead of being the rule, as he was a century ago.

The quarantine duties of a board of health are indeed very necessary, but the weightiest matter is probably that of safeguarding the people from diseased individuals already within the state.

In considering the first of the groups mentioned, it is strongly impressed upon us that the state board deals not with the cure of disease so much as with its prevention. It is not enough to treat a sick person; the physician must exert himself in every way possible to prevent the disease being passed on from one to another. The physician himself must be so educated and trained as to enable him both to recognize the condition and to limit it to the primary focus.

Those ailments that especially belong to the realm of the Board of Health are the ones that are known as the infectious, such as tuberculosis, diphtheria, typhoid fever and small-pox. In a somewhat less degree, yellow fever and epidemic cerebro-spinal meningitis come into consideration.

The control of these diseases is by no means a matter of sentiment; it is one of great economic importance. It is being more and more widely recognized that sickness is a source of great monetary loss to the public as well as to the individual, not to mention the suffering that it may inflict upon those dependent upon the sick person.

When one takes into consideration the value of the lives lost each year by preventable diseases—and tuberculosis, diphtheria and typhoid fever certainly belong to that class—it can be readily seen that a trifle of that amount, if expended for better control of the state health, would result in a tremendous saving.

Various courts have placed an average value of five thousand dollars on a person's life, and when one multiplies the number of death from the above three diseases the figures obtained are appalling. In 1900 there were in Missouri 3,459 deaths from consumption, 1,682 from typhoid fever and 1,075 from diphtheria, all from conditions that need not exist.

In a recent paper by Professor Wm. T. Sedgewick, he shows that Mr. Allen Hazen's theorem that for every death from typhoid fever avoided by the purification of a polluted water supply, two or three deaths are avoided from other causes, is not only correct but possibly conservative. When the deaths from typhoid fever in St. Louis during 1905 are considered, we see some interesting facts. There were a

hundred deaths from that disease, a loss of a half million of dollars. Then according to Hazen's theorem, two or three hundred deaths from other causes attributable to the conditions that also bring about typhoid fever, might have been avoided. Consequently it is a much wiser plan to prevent people from becoming sick than it is to cure them afterwards.

To bring this about it is necessary that these diseases mentioned be readily recognized. How is this to be done? It is a well-established fact that the man who has had the greatest experience along some special work is probably the best equipped to deal with the situation. The general practitioner is well able to undertake the clinical portion of the case, but there are certain aids to his proper diagnosis that he is unable to employ. It is at this point that the State Board is able to render very material assistance by placing at the disposal of the physician some one able to do the necessary work.

The employment therefore of a State Bacteriologist has been conceded by all to be of paramount importance. It is from him that great help may be obtained. He becomes in a way a necessity, as the majority of the general practitioners are unable to make the required examinations. This inability arises from two sources: either from a lack of proper training at the time of study, or from the lack of time necessary if the work is to be properly performed.

It is therefore necessary to have some one who, to begin with, has had the proper training and who also is able to devote to it the requisite time. The present tendency is to specialize, and there is no branch of medicine that demands the undivided attention to such an extent as does that of pathology and bacteriology. The field becomes broader and broader every day and no time is to be given to extraneous subjects if the above two are to be thoroughly grasped.

Even so comparatively simple an examination as that of sputum for tubercle bacilli is best done by some one who is accustomed to the work. This holds true to a greater degree in the recognition of the Klebs-Loeffler organism of diphtheria, and even more so in the performance of the Widal reaction for typhoid fever.

Another subject that must also be taken up for consideration is that of possessing the necessary facilities. A fairly simple but complete laboratory is expensive, and when all the apparatus that might be necessary is to be obtained, the amount of money required is much larger than the usual practitioner can afford even if he had the time to employ it.

It is consequently necessary that there should be not only a state bacteriologist, but he must have a place in which to do his work. The most advanced states possess large and complete laboratories in which all kinds of examinations can be made. Not only of those above mentioned, but where diagnoses of specimens of tissue, of urine, etc., can be undertaken, as well as chemical investigations of food products. The greater the facilities provided the greater, naturally, will be the

amount of work done and the more valuable will it be to the community in general.

It also not infrequently happens that the clinician cannot say positively what the case may be because some link in the evidence is lacking because he is unable to make the examination that is necessary. Typhoid fever, malaria and miliary tuberculosis can resemble each other sufficiently closely to make the diagnosis difficult. An examination made of the blood for either the plasmodium of malaria, or for the Widal reaction, may definitely determine which of the two diseases the patient has. Again, the finding of the tubercle bacillus in the sputum will also settle the difficulty.

There is, however, one point that must not be lost sight of. That is that the laboratory findings must not be considered as absolutely final. Too much weight must not be laid upon them, particularly if the examinations prove negative. Because tubercle bacilli are not found in the sputum it does not necessarily follow that the patient does not have tuberculosis. The absence of agglutination when serum and typhoid bacilli are brought into contact, does not in any way prove absolutely that the infection may not exist.

The clinical side, particularly that great branch known as physical diagnosis, should in no way be neglected. It is very easy to say that you will wait till the laboratory report comes in. You are losing time and not doing justice to your patient. The consumptive certainly has a much better chance for recovery if his condition is diagnosed before tubercle bacilli appear in the sputum. When that occurs there has been destruction of tissue and even if that does heal we have scar tissue replacing the normal lung. The laboratory is an adjunct to clinical medicine. It can aid very greatly but it cannot supplant physical diagnosis and experience.

To go more into detail as to the duties of the State Bacteriologist, we will find that they are primarily comparatively limited. He is expected to do those things that will assist the physicians in his state in safeguarding the health of the community at large, not so much that of the individual.

The disease that to-day demands the greatest attention is tuberculosis. The physician must not only carry out such treatment of the case as will insure its rapid recovery, but he must protect others. To assist him in that work the ability of the State Bacteriologist is put at his service.

This same holds good in regard to the diagnosis of diphtheria and typhoid fever. A single case of any of the three diseases mentioned is a menace to those around. Consequently the State Board of Health is anxious to decrease as much as possible that danger by aiding the physician in the recognition of the condition.

Such examinations as these naturally belong to the province of the State Bacteriologist, but occasionally there appears to be some mis-

understanding as to the limitations of that person's duties. The State Board does not expect to pay its bacteriologist for every and all microscopic examinations that may be desired. The Board's interest is in the protection not of the individual but of the community. It may be a matter of great importance to the physician and the patient to determine whether or not a given tumor be malignant. That, however, does not concern the patient's neighbors. Neither is the public health disturbed if a question arises as to whether or not a certain intestinal parasite is a round or flat worm. These are not matters that concern the majority of the populace as do the infectious diseases and therefore are not required of the State Bacteriologist.

Another point that comes more or less directly under the notice of the Board is the dissemination of the knowledge of the work that is being done. It is in a way a variety of post-graduate instruction. There are many men who on account of their geographical position are unable to keep in touch with some of the methods employed by their professional friends who happen to be more favorably located. It is only within quite recent years that the laboratory has been called upon so extensively. It is therefore necessary to show physicians the value of such methods. The most convincing way is of course to carry out some examination and thus demonstrate its value. This, though, can be done only with the assistance of the physician. The value of the work can be shown only by his asking; the most that the State Board can do is to inform him of the facilities that are being placed at his disposal.

A FEW OBSERVATIONS ON THE CONJUNCTIVAL REACTION TO TUBERCULIN.

By A. W. McAlester, Jr., M. D., of Kansas City, Mo.

It has been nearly a year since I had the honor to report to the Association the results I had obtained with the ophthalmo-tuberculin test. Since June of 1907, the literature has been full of reports and statistics. There are certain features in these reports that are not sufficiently emphasized and may have escaped the attention of many. If the test is to be used, it should be with a thorough understanding of the limitations and the dangers attendant upon it; therefore, I beg to call your attention to just a few observations contained in several articles upon this subject, to point out one or two limitations affecting the reaction, and to urge you to be a good diagnostician, from the standpoint of an oculist, of diseased conditions of the eye before making use of this test.

First, Calmette states that "the reaction is harmless; it is reliable, simple, afficacious and elegant." He cites ten thousand tests with no harm and with only thirty-nine cases of "excessive reaction." Personally, I have found the reaction to be as stated by Calmette, and my colleagues in Kansas City, who are using the method with proper caution, are having equal success. I have had no cases of excessive or severe reactions but I have seen one in the practice of a colleague. The reaction in this case came on some twelve hours after the instillation of the tuberculin. The conjunctiva was very edematous; the lids were swollen; the skin surface red; the glands on that side of the face were swollen and there was some pain in the brow. The patient recovered nicely under proper treatment. (The clinical manifestations which caused him to use the tuberculin consisted of night sweats and slight temperature. The patient has completely recovered.) Calmette's percentage of positive reactions in positive tubercular cases is higher than the results I have so far obtained. In the positively tubercular cases I obtained reactions in 76 per cent, but those not reacting had tuberculosis of an advanced type, and, in this connection, I wish to call your attention to the results obtained with several lots of tuberculin and to eleven cases of undoubted tuberculosis tested by Dr. Barber. Among these cases he thought there was probably only one reaction and asked me to test them with the tuberculin I was using. This tuberculin was of the same stock as that used by Smithies and Walker, whose interesting report is contained in the *Journal of the American Medical Association,* it being supplied me by the department of experimental medicine of Parke, Davis & Company. All cases reacted to this tuber-

culin except those having large cavities in the lungs. A third test was made on the eleven cases with the first tuberculin with former results, i. e., probably a reaction, and I am informed that a fourth test was made on some of these cases with no reaction. Now it is well understood that patients supersaturated with the bacillus and its products do not react. Wolff-Eisner has stated that he believes that when tuberculin is present in large quantities, it being manufactured in the body, that the addition of tuberculin from without fails to produce a reaction. Then Calmette states that he and his co-workers have failed to obtain positive reactions in guinea pigs into which a large amount of tuberculin had been injected, though the reaction was positive when a small amount of tuberculin had been injected. Roseneau has demonstrated sensitiveness to the toxin in healthy individuals, obtaining reactions, with the same tuberculin following previous instillations, in perfectly healthy physicians, these physicians all being employed in the Public Health and Marine Hospital Service. We have observed the same. This opens up the question of hypersensitization, and points to two limitations in the application of tuberculin for diagnostic purposes.

The results of such a competent observer as Dr. Baldwin have not compared accurately with the reports of others; while Dr. Derby has stated that results with tuberculin supplied him by Dr. Baldwin have not been as consistent and uniform as with tuberculin obtained from one of the pharmaceutical houses, all of which emphasizes the necessity for uniformity and a standard tuberculin for this test.

Judging from reports, I believe a tuberculin as described by Calmette necessary for the successful use in this method. In making this statement I am cognizant of good reports of competent clinicians in regard to other tuberculin. The tuberculin used by me made after his method, was very satisfactory. I want to emphasize the fact that such solutions are easily contaminated and organic life readily develops in the solution.

Another point to which I wish to direct your attention, is the bad results reported following the application of the tuberculin to the eye. I do not believe this test has a place in ophthalmology. I have used the test in four cases of diseased eyes, but have refrained from further use of it because of the bad results reported by Knapp, Ramsey and others. We have been taught that tuberculosis of the eye is a rare disease. Stephenson's statistics give one case in 1,500; others vary, Hirschberg giving one in 5,000. It must be more common than this. Wolff-Eisner thinks that the pathological picture of the tubercle is caused by the quantity of tubercular material deposited, and on this basis we can readily explain the phylctenule and interstitial keratitis, both quite common. If the tuberculous deposit is small, or the toxin to the part is small, a typical tubercle may not be produced, but such formation as cited may take place, i. e., lymphoid cells gather and a typical tubercle is not formed. The cases of interstitial and phylctenular keratitis pro-

duced by instillation of tuberculin, add much evidence to this statement of Wolff-Eisner.

If interstitial and ulcero-vascular keratitis, irido-cyclitis, choroiditis and scleritis can be produced by the instillation of tuberculin, as reported by de L'apersonme, Dr. Knapp, Mr. Treacher Collins, Dr. Hiram Wood, Ramsey, Woodcock and others, a warning must be given against the application of this test. There is little doubt that the phylctenule is tubercular; that sclero-choroiditis is tubercular, is now almost beyond doubt. Stock has produced in rabbits sclero-keratitis by the injection of tubercle bacilli into the blood. No less an authority than Mr. Treacher Collins states that sclero-choroiditis is always tubercular and can be diagnosed from the pathology and symptoms without the use of tuberculin; consequently, to the oculist the test is useless in the differential diagnosis of these conditions.

Another objection to the use of this test has been pointed out by several and that is: If tuberculin is to be used subcutaneously, the conjunctiva should not be sensitized, as a reaction will surely occur even though quite a period has elapsed since the application was made. The experiments of Roseneau, referred to, give a limitation in this connection. I have seen healthy individuals sensitized to tuberculin from inunctions of it and from applications after the manner of Pirket.

The more I see and the more I read reports on application of tuberculin to the conjunctiva, the more I am convinced that tuberculin diagnosis and tuberculin therapy should be in the hands of experts, and the general practitioner cannot look for a ready-made diagnosis from its use, as limitations affecting other tuberculin applications, affect this method. Its use involves a thorough knowledge of immunity and allied subjects, and the use of it should be confined to the hands of men who have had the best training in these.

Personally, as I said before, I have had no bad results; the reaction is ideal when slight, and fully justifies Calmette's claims for it, but it has limitations; there are certain dangers attendant upon its use, and there are other methods of diagnosis and uses of tuberculin for diagnostic purposes practically free from harm to the patient.

"A SUGGESTIVE FORM OF GOVERNMENT CONTROL OF THE PUBLIC HEALTH."

By James H. Morroway, M. D., of Ridgeway, Mo.

The sanctity and conservation of human life being indisputable facts, not only as affecting the perpetuity of the government, but principally the sum total of human happiness, individually and collectively; and it being discernible that conditions are fast developing that will cause the government to assume the duties of safeguarding these elementary requisites for its existence if for no other reason than that of economy,—upon which rest the principles of good government, which is but an organization evolved for the purpose of securing and giving such means as "permit of life, liberty and the pursuit of happiness," and which, after all, is its function, operative in two ways, by and for the people,—therefore, we must realize the obligations of the government to the individual, and cause a faithful discharge of such a duty, as regards matters of health.

The constant shifting of the burden has not caused it to resolve itself—far from it—it has only added more perplexity to the situation; hence it is the government that must eventually grapple with the problem and cause its solution; because of its national aspect, it must have the sanction of authority from the people in doing so; and once obtained how are we, the medical profession, going to conduct ourselves towards the new order of things?

The medical profession has accomplished much, and is to be congratulated on its work, but we must acknowledge that it is impossible for us to accept the burden any longer; it is an injustice, though we took upon ourselves another's duty—we are crushed and cry out for aid—our altruism led us astray.

While upon our shoulders rests the responsibility, from our primary relations with the people; we accept it; but, only the responsibility of the operation, not the burden itself; we being as workers in a mill—the owner of the mill being the government, that is, the people. And if all this should come to pass, how are we to secure an adjustment between all concerned—how cause an immediate and satisfactory operation of such a contemplated action?

It is unwise, and dangerous, and better to at once stifle any attempt to establish a bureau of health, without reckoning with the country practitioner—without making him a part; so that will warrant immediate dismissal from our minds once and for all. So in consequence, would it be advisable to allot or parcel out to each man so many square miles or

acres over which he would be sanitary inspector? That is impossible, the many and varied problems of individual differences and preferences—removals—and all those things that are so vexing, that pertain to the present day practitioner and his work. But an easy, practical, and ultimate solution is rendered by our geographical divisions and subdivisions; our entire country being divided up into states and counties makes easy the working of the plan.

This plan permits of all individual freedom of all concerned.

The doctor remains or goes where he pleases—the patients choose whom they will—merit comes into its own after all, and that is the true basis. Thus the doctors and people remain as they are, both knowing that the government is now the operator and that such regulations obtain. In each county have a competitive examination for the position of subchief inspector—his duty being to receive weekly reports from all the county physicians—checking them up and forwarding them to the state chief—a position similarly obtained or a government officer stationed within the state.

This checking up will dispel all suspicion, compel honesty, as if the diagnosis after the third visit is unascertainable, the attendant must call another physician or county subchief, and he in turn a state department chief, of whom there shall be specialists in each branch of medicine, with powers of delegation provided he is busy—the national state chief being chairman of the board. The positions are each held for periods and conditions varying, and compensation for some or all from the local practitioner to the various heads, being compulsion of all sick or injured to report themselves, whether the trouble is minor or otherwise. The people being furnished with stamped books by the government, which makes a fair schedule of prices—and pledging itself thereby to pay one-half of the bill—these cards redeemed by the government when duly countersigned; or a tax. The state national chief reports direct to the United States Bureau of Health—then we have complete surveilance of the medical man and his work from beginning to end.

A check on the local physician being an investigation and fines, but continued offense revocation of license. And here, also, is brought the prospective medical student and medical colleges under control.

During their unemployed time the county men with the subchief, attend to sanitary measures; the county subchief, preferably located at the county seat—to have all the armamentarium required for work possible to be done by the local men, the state's department chiefs or their delegates. A county hospital, without the usual opprobrium complete in all details, for those demanding institutional work.

A like assortment of drugs of utility.

This plan removes all the evils about and within the profession to-day, the knowledge of the governmental disposition towards offenders would not permit of many abuses.

That this would do harm to other hospitals or individuals, bequeathing to charitable purposes or institutions, is not true—as patients can use their own judgment whether they will go or be referred wherever their best interests would require and money given to the government would bring more lasting fame and yield other and greater benefits.

Our present civilization, at best, is only a mass of artificialities and only for the time being—as during its onward march, new problems, deemed strange at first, but ultimately solved, are the best or height of accomplishment. Therefore there must be given a new version to the statement of "a government supported by the people, instead of the government supporting the people," and so the government must be such, as would discharge its duties and effectively husband its strength for, if the expenditure is greater than the income the result is bankruptcy.

CARE OF THE BREASTS AND NIPPLE DURING PREGNANCY AND THE PUERPERIUM.

By Percy H. Swahlen, M. D., St. Louis, Mo.

The etymology of our medical terms is always of interest, and if we trace the latin "mamma" back to the Greek μάμμη we find both words used in the sense of our English word breast. The diminutive mammilla was used by the Romans to mean either the nipple or the male breasts, while the Greeks employed the word μάστοι (occasionally μάζοι) to designate that the nipple was not only included but was to receive especial consideration.

In order to better appreciate the discussion of this subject let us first refer to a few points of the gross anatomy and physiology of the parts. The two large semi oval glands with flat bases, termed breasts, rest upon the pectoral muscles from about the third to the seventh rib vertically and horizontally from the axilla to a furrow parallel to the sternum, known as the bosom. These limitations remain true in the large majority of cases and when old practitioners speak of having seen breasts that could be thrown over the shoulder they are dealing with the depths of the organs which differ greatly. This third measurement is not so much dependant upon the acinous glands composing the parenchyma as it is upon the interstitial and subcutaneous fat which later becomes absorbed and leaves us the condition common to old age or to younger women suffering with chronic wasting affections. I use the term affection advisedly for I have just confined an unmarried Hebrew girl of 17 years who claims to have lost considerable weight during pregnancy and whose flabby breasts hung down to the costal margins on each side. The glandular structures were fairly well developed and an apparently normal amount of milk appeared on the fourth day. In this case no anatomical abnormality was found, but patient was melancholic and suffers with anorexia and constipation, although taking sufficient physical exercise daily.

Because of the intimate connective tissue relationship among the lobules of the glands it is impossible to separate them into so many lobes but the latter are supposed to be represented by the milk bearing ducts, sixteen to twenty in number, which dilate under the areolæ to form reservoirs before opening upon the surface of the nipple. One opening often serving for two or three ducts. Nor is it to be forgotton that the so-called "milk glands," or tubercles of Montgomery, connect with the lactiferous tubules.

Beneath the areola and in the nipple no fat is to be found but a comparatively large amount of involuntary muscular fibres. Those in the

nipple extend circularly and longitudinally, the former causing a prolongation, the latter assisting in the hardening condition brought about by external irritation.

The abundant blood supply of the glands comes from the internal mammaries, the intercostal and axillary arteries. Gray states that a complete venous circle exists about the base of each gland and Haller and Sebastian describe venous circles of the areloæ.

The lymph glands of the breast connect not only with those of the axilla but also with those of the mediastinum and with one or two glands lying beneath the clavicle.

The nerves are derived both from the cord and from the sympathetic system—the former by way of the intercostal and the pectoral branches, the latter from the thoracic plexus. Of these only the sympathetic and the branches of the cutaneous pectorals preside over the glands and accompany the lactiferous tubules to the nipple, some ending just beneath the cutis and others in it.

Regarding the physiology it suffices to say that beginning with the last of the second month of pregnancy the woman becomes conscious of an odd sensation in the breasts due to pressure upon the nerves by the enlarging secreting cells and the increasing fat deposit. Soon a thin watery fluid, called colostrum, or the "advance milk," may be expelled. This forerunner of the true milk is composed of fat globules and an albuminous fluid and differs principally from its successor in that the albuminoid capsules have as yet not surrounded the fat globules—shown by the ready coagulation upon heating.

With these few remarks we are now ready to advance our hygienic treatment, and the nipples attract our immediate attention. The exuding colostrum dries readily in the folds of the nipple and the resulting yellow crust adheres closely to the delicate epithelium causing an exfoliation of the same. In order to avoid this the cutis from the middle of pregnancy on should be washed twice daily, first with a mild soap and warm water, followed by cold water. If the nipples be small or inverted the involuntary muscle fibres should here respond to use and develop similar to those of the heart. Therefore, drawing forth of the nipple for five to ten minutes after each cleansing, if necessary at first resorting to the use of a suction agent, appeals as a much more natural process than the application of alcohol or tannic acid, which, if strong enough to accomplish the desired effect, destroy the tender epithelium and relieve the skin of its lubricant.

The rapid enlargement of the breasts does not permit the skin to adapt itself as is desired, so in order to avoid the striæ and the often unpleasant nervous sensations gentle massage with a softening agent is advised. Whether an oil or fat is used is immaterial so long as it contains no harmful ingredient. After such a treatment warm water and soap remove the excess of fat from the skin and then water at a temperature of 45° F. leaves the part soft, clean and firm. Water at this

temperature is cold enough to cause increased vitality of the skin and yet does not tend to produce any unpleasant synchronous uterine contractions. In two cases that I have recently seen where olive oil had been used without freeing the skin from the excess, small pustules formed in the vicinity of the nipples and burrowed quite deeply into the subcutaneous structures before healing occurred.

In applying massage during pregnancy we must keep in mind that if the breast becomes tense in spite of the foregoing treatment we probably have to deal with a venous congestion and our rotary massage should be so carried out that the greatest pressure be exerted at the base of the gland.

Should the breasts become uncomfortably heavy a bandage or support is indicated and in considering the same three questions must be answered:

1. Is this woman to nurse her child?
2. Age of patient?
3. Condition of breasts during previous puerperia?

If the first question be answered in the negative there is no objection to a firm binder, not so tight, however, that the respiration be hindered. If answered in the affirmative, pressure, as far as possible, is to be avoided, the support partaking of the nature of a sling.

The age of the patient concerns us because the majority of elderly primiparæ have trouble in establishing a flow of milk sufficient to nourish their offspring for the first few months, and the increased blood supply is to be encouraged rather than hindered.

Under number three it is not the history of an infected breast at a previous puerperium so much as the quantity and quality of the milk at such times that invites our attention.

During the first twenty-four hours of the puerperium the management is practically the same as during pregnancy with the exception that after twelve hours the child may be put to the breast.

If the breasts during the puerperium cause the patient no inconvenience I use no bandage, feeling that the action of the air upon both breast and nipple is conducive to much better results than is derived from hot or irritating supports. During the second twenty-four hours I see no disadvantage in placing the child on the breast every three or four hours. True, practically no nourishment is to be obtained, but as the child mouth is cleansed with a 4% boric acid solution, just beforehand, and the nipples and areolæ disinfected in a similar manner, both before and after nursing, the danger of infection is small and great benefit is derived from the fact that the nipples have accommodated themselves in a way to the act of nursing before the milk appears. In other words the unpleasant symptoms usually present with the coming of the milk are not aggravated by the act of nursing. If these symptoms be present in the form of hard, red, exquisitely tender breasts, slight rise of temperature and a general feeling of discomfort on the part of the

patient we probably have to deal with a passive congestion and our treatment resolves itself into (1) massage till the breasts are less tense; (2) firm but not too tight binder; (3) ice bags on breasts; (4) catharsis, to a medium degree; (5) if very nervous, patient may receive 15 to 20 grs. of a bromide solution; (6) child placed on breast as if no discomfiture.

If, on the other hand, there is no congestion but simply a feeling of uneasiness and a slight rise of temperature, Olshausen states that the application of warm wet cloths to the breasts will often alleviate the nervous symptoms and assist in the "coming of the milk."

Although the breast pump is often used in both of these conditions, I believe it of little value as the amount of milk drawn is usually of small amount and the congestion is more often increased than diminished.

Of late some have advanced the theory that if a rise in temperature exists synchronously with the appearance of the milk they are to be considered separately as the fever means infection. This is not believed by most thinking obstetricians and Olshausen says that a temperature not exceeding 100.5° F. is often present without any other evidence of infection. Just how this phenomenon occurs we do not now, but it is a fact that nervous individuals are more prone to a fever than their phlegmatic sisters.

As regards catharsis, castor oil is given the preference because it produces a watery stool with less griping than the other agents.

If for some reason the mother is not to nurse the child, our management, beginning at the end of the third stage, differs. Sterile cotton is now placed on the outer side of each breast and a suitable piece between them, the nipples are covered with sterile gauze and a *tight* binder is applied. If no signs or symptoms of discomfiture appear the binder is tightened as it becomes loose or uneven and remains in place for a period varying between one and two weeks, depending on the case, being opened only occasionally to cleanse the nipples. If the "coming of the milk" gives rise to signs or symptoms of a serious nature, the same treatment is to be instituted as for the nursing mother, with the exception that strong, not medium, catharsis is recommended.

Belladonna and camphor ointments are contraindicated because if used in excess the damage to secretion is long continued and who can say what the limit for each individual case is?

It is often the case that a child prefers one nipple because milk is obtained from this breast with less effort. He should not be humored in this and should be made to nurse on this side, even if hunger must be resorted to. It is sometimes advisable to place him on this breast twice in succession, using the breast pump on the other. If this be not done the one breast soon ceases to secrete and later one breast proves insufficient. A little sugar water on the nipple often works admirably.

As soon as a nipple becomes sensitive or shows a fissure the child should nurse through a shield till the sign or symptom is passed, or if the condition becomes worse the child should not nurse it at all. Cleanliness of the part and the removal of the traumatic etiology suffices without the application of chemicals. If we meet with an infected breast the present treatment is to produce multiple punctures and enclose the entire breast in one of Bier's glass bells. Blood, pus and milk are all drawn off by this method and the congestion is relieved. Ice bags to the breast and purgation with bed rest complete the outline of treatment.

Suppose, on the other hand, that despite our use of hot cloths the breasts on the end of the fourth day show only a small secretion and the expected fullness of the parts is lacking! Here we have to deal with a disturbance of secretion and through elimination diagnose faulty glands. We are told that first of all the patient must receive a rich diet. This is a broad statement and we know so little about the foods producing milk that it is uncertain. The quiet, easy-going country woman will probably give more milk if taking the diet to which she is accustomed—salt pork, beets, cabbage, etc.—but imagine a physician prescribing the same for a nervous woman of one of our large cities.

Our problem is first, how to stimulate the glands and massage, electricity and placing a large, strong child to the breast at times improve the condition. A late theory is that the loss of nitrogen during pregnancy is great, and that if we supply a highly nitrogenous diet we will be rewarded. In several cases I have employed beans, peas, lentils, various meats and an abundance of cocoa, milk, malt and water, and in addition Mal-tropon. The last named is said to be a preparation of malt with the nitrogenous compounds of grains and is pleasant to take. In the majority of the cases no artificial feeding became necessary, but I am prone to believe that the condition of the nervous system plays the principal role.

If instead of having too little milk the opposite be true, or we desire to suddenly stop the secretion, tight bandaging and purgation are the most valuable means but do not always bring about the desired result. In this connection some report splendid results from the use of potassium iodide. Abegg used douches to bring the blood to the uterus and to locally stimulate the same, while Gottschalk reports scarification of the cervix a good means to bring about the desired result.

TINEA SYCOSIS.*

By T. F. Lockwood, M. D., of Butler, Mo.

The subject of my choice for this occasion is one of no little importance to the diagnostician, as there are so many forms of eczema to claim attention of the dermatologist. I believe three-fourths of all skin lesions may rightly be classed as one form or another of this common complaint. So predominant are these eczematous eruptions that we have become too prone to call all skin troubles, regardless of location and severity, eczema.

Tinea sycosis, or ringworm of the bearded region, is not so common by far as tinea capitis, tinea circinata and other forms of ringworm which take their name from a resemblance of something else and from a certain favored location upon the body. Like eczema, the varieties are so numerous and so varied in their pathological aspect, that I shall not undertake to describe any of the many phases of the disease except the variety commonly called "barber's itch." However, I shall state in passing that all forms of ringworm are either of a parasitic or microbic origin, a specific fungi, if you please, very persistent and contagious in nature. There is a form of this facial malady called "sycosis vulgaris," which is non-parasitic, but microbic instead. This variety is characterized by a chronic inflammatory affection of the hair follicles of bearded regions and in extensive cases it is said to involve the eyebrows and other hairy regions remote from the head, but I have never seen so extreme a case as this. This form is not met with so frequently as other varieties of the disease, owing, perhaps, to being less contagious. It is indeed fortunate for masculine kind that this is so, for being persistent as it is in its course, lasting sometimes for years, a victim of the disease would be certain to inoculate many during the prolonged career of his affliction.

As we are not called upon to treat this form of sycosis as often as some other varieties, and as the treatment is practically the same in all cases, I shall pass on to the more common complaint.

I shall first call attention to the fact that every time we diagnose a case of barber's itch, and so inform the patient, just that often we are going to make an enemy of some barber. The patient invariably loses his temper and proceeds to take recourse on the barber who always resents the accusation by heaping epithets upon the doctor and severely criticizes his diagnosis. Therefore, it is important to choose well your words in informing your patient as to the real nature of his ailment. If

*Read before Bates County Medical Society, Butler, Mo.

he is one who cannot be restricted to a reasonable compromise of the situation it is far better to confine yourself to technical phrases than to tell him outright that he has barber's itch. If you are governed by certain conscientious scruples and must tell him in plain words the real cause of his facial blemish, then you must be sure beyond a doubt that you are correct in your diagnosis of the case that you may be prepared to meet any emergency or unexpected controversy arising therefrom.

There are two plain varieties of tinea sycosis, the superficial and the deep-seated varieties, both beginning in the same manner and much like ringworm on non-hairy parts; as one or more rounded, slightly crusty hyperemic patches more pronounced peripherally than in the center. Several near-by patches may coalesce, giving rise to large irregular areas. Sometimes there is slight itchiness and in the early stage I have seen this annoying feature intense. The hair follicles are more or less involved, and resemble similar changes to those observed in scalp diseases. They are easily extracted; in fact, in many advanced cases some of them drop out spontaneously. The malady may thus continue for an indefinite period, seldom ever showing a tendency to recovery without treatment. In the superficial variety there is but little disposition to pustulation, but in some instances the process involves the tissues more deeply, giving rise to thickening and infiltration, finally developing into the nodular form or deep-seated variety. This type occasionally begins similarly to sycosis vulgaris, but after remaining superficial for a variable time, shows a decided, and often rapid, tendency to extend down into the hair follicles and tissues. As a result of such deep involvement of structure, subcutaneous swelling ensues and the parts assume a lumpy and nodular aspect, suggestive, when extensively developed, of a group of furnucles or cutaneous abscesses. So large and so many are the perforations on the summit of some of these abscesses as to resemble the formation of a carbuncle crater. In fact they have been mistaken for carbuncle and treated as such. These hard nodules, after a time, soften and break down, discharging through these follicular openings, a purulent material which if let alone will dry, forming a thick adherent crust over the field, favoring, very much, parasitic propagation beneath by hindering direct applications of such means necessary to destroy the parasites. This form is contagious and may be conveyed by direct contact or through the medium of toilet articles and wearing apparel. It is conveyed sometimes from hotels where many are permitted to use the same face towels.

While barber shops are the most frequent source of infection, yet they cannot be held responsible for all cases occurring in our practice, as we know it attacks individuals who do not frequent the barber shops, hence the infection was due to a different cause.

With all the modernized barber shops and with extreme precaution practiced in the way of cleanliness by skilled barbers, yet we have this

condition to deal with. Subjecting shaving mugs and brushes to extreme heat is good as far as it goes, but it is too limited in results. When a barber does all this in addition to using clean towels on his customer he has done all he knows to do as far as asepsis goes. What more can the poor barber do to protect his customer from this loathsome malady? He has scalded his mug and brush or used the customer's private utensils; he has scalded or disinfected his razor and still he may have carried a contagion to his customer's face. How did it occur? I shall endeavor to explain how he may have inoculated his unsuspecting customer even after having adopted all the above rules of cleanliness. He may have shaved a former customer with an unnoticed incipient and insignificant pustule on his face during which he stropped his razor several times after cutting into a pustule, carrying the germ to the strop and spreading it about each time to reinfect his clean razor, or for the next customer he shaves. This source of infection is overlooked by most barbers and they wonder how their customer could have contracted the disease in their shop when so much pains had been taken to give a clean, hygienic shave.

Until some plan is adopted by which the razor strop may be systematically disinfected, we may expect to be confronted with this stubborn malady called barber's itch.

If barbers were to immerse their razor in pure alcohol before stropping, and occasionally the strop, especially after shaving suspicious subjects, I believe it would prevent the spread of this contagion. There is no better chemical germicide than pure alcohol. I believe barbers should take sufficient instructions in dermatology as to render them able to recognize all contagious skin diseases of the face in its incipiency, that they may avoid scattering a disease that is wrought with so much pain and disfigurement. My method of treatment is somewhat different from the usual course laid down by text-books. However, I resort to some of the antiseptics used in the majority of cases, but use them for a different effect. The first step taken is to saturate a bunch of absorbent cotton with pure grain alcohol and use as you would a sponge, mopping the parts thoroughly, removing any crusts that may be present. I keep up the alcohol irrigation by squeezing the cotton over the field of operation and proceed to remove all hairs from the diseased surface, and for a short distance beyond the diseased margin, all the time working under alcohol irrigation. I look for new areas, and if found, I remove all hairs from the new foci in the same manner and touch the spot with pure carbolic acid from the end of a toothpick. When the spot turns white from the acid, I apply more alcohol as before and finish my dressing by dusting on a powder composed of equal parts of calomel, boric acid and pulverized acetanilid. This drys the oozing of serum that always follows the pulling of whiskers. I use this as a dryer as well as for antiseptic measures. It prevents the secretion from coming in contact with healthy

territory and infecting new areas of skin. This artificial crust must be removed at each subsequent treatment that you may better inspect the parts, and at the same time allowing you to remove any hairs that may have grown out in the interval. If you will follow this course of treatment, applying it about every other day, you will have but little trouble preventing extensive spreading and cure your patient without leaving scars.

A Physician of Souls.—It was on the North Sea that Dr. Grenfell served his apprenticeship as a missionary to the deep-sea fishermen. An Oxford graduate, trained in surgery at the great London hospital, he was "converted" by a sermon of the American revivalist, Dwight L. Moody, which he happened to hear one night in London, and went out to the Doggerbank on the medico-missionary ship that ministered to the physical and spiritual needs of the hardy Englishmen who reap the harvest of the sea in those perilous waters. The establishment of this service was largely due to the efforts of the famous surgeon Sir Frederick Treves, and the service itself became world-famous in 1904, when the mission ship went to the rescue of the innocent victims of Russia's armada, just starting off on the long journey that was to end in its destruction. It was after a "heart-to-heart talk" with Sir Frederick that the young surgeon, who had already determined to devote his life to helping his fellow-men, decided to throw in his lot with the deep-sea missionaries.

The work on the North Sea being in competent hands, Dr. Grenfell soon turned his attention to the urgent needs of the fisherfolk on this side of the Atlantic. Medicine and surgery were known to the dwellers in Labrador only through the visits of a doctor who came on the mail boat at intervals of three weeks during the few summer months when navigation was possible. In the matter of religion their condition was no less benighted. In both respects the coming of Dr. Grenfell has wrought an almost miraculous change. At comparatively accessible points he has established a chain of hospitals where religious services are also held. All summer long, in his steamship Strathcona, he cruises up and down the coast on errands of mercy to the fishermen and their families; in winter he visits them at their snowbound homes, and on dog sledges gathers into the nearest hospital those who need to be there. He has also established a number of coöperative stores, and by so doing has relieved the crushing poverty that was driving many of them to despair. On his summer voyages he carries books about with him, and leaves them at certain stations till his return. He is, moreover, vested with magisterial authority, as most of his parishioners are beyond the reach of the courts. But he is a missionary first and last, and regards the saving of bodies as merely incidental to the saving of souls. It is for this reason that, on his recent winter sojourns in the United States, he has spoken chiefly in the churches and been heard mainly by the devout.—Joseph B. Gilder in the June *Century*.

ACUTE INFLAMMATION OF THE MUCOUS MEMBRANES OF THE UPPER AIR PASSAGES.*

By W. K. Statler, M. D., Oakridge, Mo.

Perhaps in the whole realm of conditions where Nature departs from the paths of rectitude, she does it in none so frequent as in acute inflammatory disorders of the upper respiratory mucous membranes.

Among human disorders, what is more common than a "common cold," yet, strictly speaking, the ordinary "cold" is but an acute inflammation of the mucous membranes of the upper air passages. When we consider, however, the physiology of the upper respiratory apparatus and recall the fact that over these sensitive mucous membranes must daily pass thousands of cubic feet of air, laden with countless millions of micro-organisms, besides particles of dust and irritant vapors, we almost wonder why these acute attacks are not more frequent. This is due, in all probability to the peculiar physiological ability of the nasal mucous membranes to filter out and, to a certain extent, render inert these ever present foes. So rare indeed does an infection occur on the wounded surface of the nasal mucous membranes, subsequent to the many surgical procedures practiced by our nose and throat specialists, that we have come to believe that one of the functions of the nose is to sterilize the inspired air.

While not of great moment, outside of slight suffering and considerable inconvenience, "colds" frequently lay the foundation for graver ills and thus act as a signal of warning lest such a degree of depression be allowed that a soil be prepared for the seeds of malignant, acute or chronic disease that may, in the end, prove mortal.

"Colds" are, without doubt, pure infections, but the bacteriology of this question has not been definitely settled. Like pneumonia and acute articular rheumatism, it seems that there is a variety of different organisms that may produce the condition; so at this time we do not consider the ordinary "cold" as a distinct specific infection. There is one variety of "cold," however, that may be classed as a specific infection, viz., that caused by the Pfeifer organism or the condition we call la grippe. In my opinion "colds" are, for the most part, contagious, although this is an unsettled question.

The direct cause being established as infection by micro-organisms, that which is of more practical interest is the consideration of the indirect causes. The indirect causes of "colds" are legion, but chief among them I believe to be the old accepted doctrine of chilling of

*Read at the Meeting of the Cape Girardeau County Medical Society, May 10, 1909.

some surface of the body with its consequent disturbance of the equilibrium of the circulation.

I am a firm believer in free ventilation but I also believe that a cool draft of air on the resting or fatigued body is distinctly an invitation to attacks of acute inflammation of the mucous membranes of the upper air passages. In spite of the dictum of able writers to the contrary, personal experience has time and again taught me that sitting quietly reading or resting in a cool draft of air, especially after exercise, will precipitate an attack of acute rhinitis. Of course the liability to these acute attacks depends greatly upon vital resistance and those predisposed to "colds" are those who indulge in such indiscretions as sleeping in ill-ventilated rooms, wrapping the body with heavy mufflers and other heavy garments when climatic conditions do not justify it, avoidance of out-door exercise, avoidance of regular bathing and in those whose mucous membranes of the nose is the seat of chronic inflammation, spurs or polypi and in those who have been endowed by nature with feeble powers of resistance.

But the question comes to us all, why should the nasal mucous membrane alone so often have to bear the brunt of this disturbed circulation? This can be explained only by referring the matter to a reflex or to the sympathetic nervous system.

After the chilling of the surface of the skin, whether it be that of the feet, of the area between the shoulder blades or even of the scalp after a hair cut or shampoo, the equilibrium of the circulation is disturbed and the first manifestation will be a local anæmia of the nasal mucous membrane with its consequent lowered vitality and here in the presence of myriads of ever present foes the infection takes place. Nature responds to this insult by bringing bands of leucocytes and stationing them at all points within the tissues comprising the nasal mucous membrane in order that the invading enemy might be repelled. This response of nature to irritation and infection is but the steps of an acute inflammation.

This warfare continues between leucocytes and organisms for several days; sometimes the enemy seems to be in command of the situation and at other times it seems to be in retreat until by gradual steps, and thanks to the opsonic power of the blood serum, which renders the organisms much more attractive and palatable to the hungry leucocytes, the organisms become overpowered and the battle ends.

The mucous membrane, however, must pass through the trying days of reconstruction; the waste of war, in the shape of dead organisms, cast off epithelial ramparts, fibrinous masses and overloaded leucocytes, must be cleared away and thus the mucous membrane is finally restored to its former condition; only to be the scene at some future time of a repetition of a similar fray. This, in short, is the succession of changes that constitutes an inflammation of the mucous membrane of the upper air passages.

The symptomatology of a "cold" even by the laity is to well known to justify much comment, but it may be said that all the functions of the nose become impaired; conduction of the secretion first becomes disordered; then olfaction becomes less acute; then follows disturbance in phonation and audition; respiration may become so embarrassed that mouth breathing is necessary; there is constant irritation in the nose, eyes and lachrymal ducts, with a desire to sneeze or blow the nose; there may be headache, due to the closure of the opening leading from the frontal sinus; there may be slight fever with its consequent chilliness and aching back and limbs; there is loss of appetite, painful swallowing, sometimes earache, and almost everything that would contribute discomfort to the unhappy victim. The usual termination is a complete subsidence of all symptoms in from four to ten days. The immunity does not seem to last long as attacks are prone to recur and until we become able to produce climatic conditions to order or make a radical change in the long established habits of the children of men, we will continue to experience from time to time the blowing and sneezing, the running and tickling, the burning and smarting, the scalding and snuffling of the acutely inflamed nose.

THE IMPORTANCE OF EARLY ATTENTION IN ALL CASES OF RECTAL DISEASE.*

By James C. Minor, M. D., Chillicothe, Mo.

It is a fact, in my opinion, that diseases of the rectum and anus, in all their various phases and characters, are most wonderfully neglected, not only by the profession in our own country, but in foreign countries quite as well. I am not prepared to say why the profession in general is so dilatory in the recognition of this fact. While in London last season I was surprised to be informed by some eminent operators that no one in that great city had taken the place made vacant by the late Alingham Brothers (Dr. William and Dr. Herbert), but notwithstanding this, London has some very able proctologists.

My experience in proctology, covering a period of seventeen years, has convinced me, beyond question or doubt, that the majority of the medical profession to-day does not begin to recognize the importance of this class of diseases, and the sympathetic effects, to say nothing of the importance of early attention in such cases. This applies not only to the country practitioner, but to the practitioner in our cities also. For example, I have seen many cases that had been taking treatment for hemorrhoids, when a carcinoma of the upper portion of the rectum, or perhaps of the sigmoid flexure, had been overlooked by the attending physician.

I am not offering this in the nature of a criticism, but as a plain fact, which conclusion my experience has caused me to arrive at. I would say, conservatively, that ninety per cent. of the cases of malignancy of the rectum I have met with, have given me no history of heredity at all, but almost without exception, a history of some minor affection of the rectum, or anus, preceding the malignancy. I do not pretend to say that all cases of hemorrhoids will in time develop into malignancy, but that all patients who are suffering from not only hemorrhoids, but who may have any disease of the rectum, or anus, benign in its character, are subject to the development of malignancy at any time, as a result of the stool passing over the diseased surface, thereby acting more or less as a constant irritant to the dieased area.

I am thoroughly convinced that a simple case of hemorrhoids can act, either directly or indirectly, as a predisposing cause of malignancy of the rectum. The general tendency is to treat rectal diseases as a class not requiring much attention, or skilled service; that they are of little consequence.

*Read before the Livingston County Medical Society, January 13, 1909.

It is a common occurrence when a patient consults his family physician about any rectal trouble he may be suffering from, to take a brief history of his case, or perhaps no history at all, but accept it as a matter of course that the patient has hemorrhoids, and without so much as making a partial examination, proceed at once to write a prescription for some soothing lotion to apply externally, or perhaps a suppository to be inserted into the rectum, which may give temporary relief. Thus the patient drifts along until he may have another attack, in many cases losing time that may be very valuable to his comfort and life, and possibly the opportunity of effecting a complete cure, by not making a careful and thorough examination, arriving definitely at the true diagnosis of the case, and operating accordingly; not just operate and leave the patient for a week, but follow the case up with daily dressings. Often the care the patient receives after the operation is more important to the desired outcome of the case than the operation itself.

Too often is it the case that patients drag along for months and years, taking treatment for neurasthenia, lumbago, constipation, anemia, dysentery, and numerous other affections, when the seat, or cause of the whole trouble is in the rectum, and can be corrected and cured by operative procedure. The amount of pain the patient suffers is no indication of the severity of the case.

Thus a derangement of the rectum that may seem very trivial, indeed it may not even be painful at all, may be causing serious disturbance in some other organ. The very decided sympathetic reflexes in rectal diseases may be easily accounted for, when we think of the relationship of the sacral plexus, spinal cord, and the brain. If the profession in general could be aroused to the magnitude of the importance of not only early attention, but intelligent attention in these cases, a world of suffering would be avoided and the lives of thousands saved from an untimely grave.

OUR COUNTY MEDICAL SOCIETY.*

By J. W. Clark, M. D., Joplin, Mo.

Our County Medical Society at present in its membership comprises approximately one-fifth of the total number of eligible physicians of the county.

About half of this small fraction represents the active regularly participating membership of our Society.

Our regularly participating membership therefore represents about one-tenth of the eligible list.

This is appalling in the extreme to contemplate when we reflect and behold the multitudinous advantages to be derived from an active regularly participating membership.

These advantages are so obvious that it would seem not only superfluous to rehearse them but a flat reflection on the intelligence of any of my hearers who may not be participating members were it not that such physicians for some reason persist in neglecting their duty to themselves, their fellow-practitioners and their patronage by neglecting to become participating members of the Society. Therefore, I feel justified in rehearsing some of the advantages of medical meetings to the regular participants.

In the first place we grow better acquainted and therefore become better friends and more willing to pull together harmoniously in our daily practice.

In addition to that, the frequent association of physicians and surgeons in regular meetings for the consideration and discussion of medical and surgical subjects, obviously broadens all those participating by reason of the fact that the subjects are discussed from so many viewpoints.

It is quite apparent how participation in such work keeps the doctor from drifting into routine grooves that breed only stagnation.

These pathways or grooves grow deeper and deeper year by year, as the solitary physician plods in them, until he becomes unable to extricate himself from them, however inviting may be the newly-made highways on either side.

Regular participation in the Society work prevents this, as many helping hands are extended to aid each member.

The "one-idea" doctor is always a dangerous doctor. The doctor who participates regularly in medical society work is in no danger of becoming a "one-idea" doctor.

*The address of the retiring president.

The varied ideas of the many are brought forcibly before him by introducing other avenues often more direct than the little pathway he has been plodding.

Dr. McCormack, who certainly knows more about the value of medical society work than any living man, tells us that if properly participated in, its value to such participating member might well be compared to the value to be derived from a post-graduate medical course.

We physicians of Jasper county are particularly favored by street car facilities for meeting together. Those of us who do not participate can only blame our individual selves.

When we see that the busiest men in the profession in this and other countries are participating members of medical societies, we cannot accept the "too busy" excuse any longer.

You will note that I have been describing the benefits of the regularly participating membership.

The non-participating member certainly is aware of the benefits to which he is entitled.

An occasional attendance will not suffice any more than an occasional meal will suffice to maintain the body strength.

With the able men chosen to direct us in our work this year, our membership should swell to include every eligible practitioner in the county before the year ends.

In conclusion let me say that the best New Year resolution any physician can make is that he resolve to be a participating member of his county medical society during the ensuing year.

SELECTED ARTICLES

HODGEN SPLINT.

The following article by Gerald C. F. Robinson, F. R. C. S., of London (Eng.), on "Hodgen's Splint in Private Practice,"* is a very clear and intelligent description of the advantages of the Hodgen Splint, and will, we believe, prove interesting to our readers as showing how this apparatus is esteemed in the surgical practice of English physicians:

"The difficulties of treating fracture of the femur in general practice are considerable, and the methods used many and various. Of all the splints described in text-books, not one is applicable to every case, and each has some serious drawback which detracts from its value.

Most splints consist of long pieces of wood firmly fixed to the patient, and often to the bed itself, making satisfactory nursing an impossibility, which means two months' discomfort for the patient. Another point common to most splints is that the site of fracture is covered up and pressed upon by boards and bandages, impeding circulation and preventing any local treatment, which, in a fleshy part, like the thigh, is very important.

There is one splint, however, invented by Hodgen, an American, which has many advantages and few drawbacks, and which is not used nearly so commonly as it deserves.

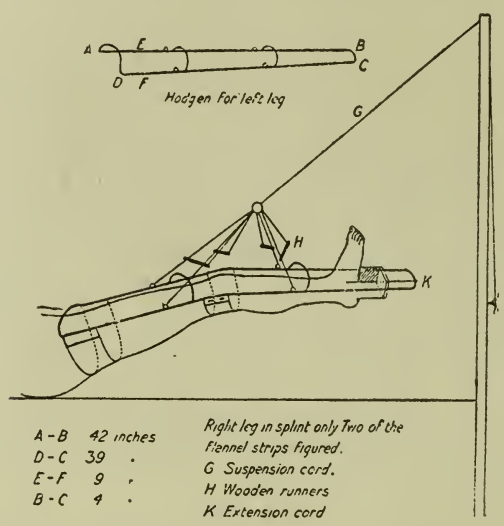
Any man who is able to use a soldering iron, can make it for himself in a short time for the small cost of one shilling. When once made it is practically indestructible, easily sterilized, and applicable to almost every fracture of the femur that can occur.

In order to make the splint, 9 feet of fencing wire, ¼ inch thick, is required for the framework, and a few feet of wire half that thickness for the arches, which should be two in number and so placed that they divide the length of the framework into three equal parts. Lastly, the wire loops should be soldered to the frame, 1 inch above the attachment of each arch; loops are preferable to the hooks usually sold on these splints.

The top end of the splint should be 9 inches wide, the lower end 4 inches. The shorter of the two limbs should be 39 inches long and the longer 42 inches (this size will fit the majority of legs). The width of the splint can be altered to some extent, if required, by bending up or flattening out the arches. The diagram represents the splint with measurements.

*In *The Practitioner* (London) for April, 1909.

In order to apply the splint, a stirrup is fixed with strapping below the knee, having a piece of wood at its center, 3 inches square; this is wide enough to prevent pressure on the malleoli. A cord K is passed through the wood and fastened to the wire midway between B and C, so that when the splint is laid upon the leg with the cord K taut, A lies on the anterior superior spine, and D lies above the tendon of the Adductor Longus. The frame is now bent to the degree of flexion of the knee, which is the most comfortable for the patient, quite irrespective of the position of the fragment which has to be adjusted later, when the extension is being exerted. As a rule, no anæsthetic is required at this stage, and often none is required at all, for, when the splint has been properly applied, the position of the fragments will be found perfect;



if, however, one fragment is engaged in the surrounding muscles, an anæsthetic will be required later, but the splint can be applied first with very little inconvenience to the patient while the limb lies supported on pillows.

Strips of flannel are now fastened along the inner limb of the splint by one end and passing under the leg, the other end is fastened by pins to the outer limb, adjusting them roughly at first to form an even trough for the leg to lie in. Cords are now tied to each loop on the frame, and a small wooden runner, 2 inches long, threaded on each. The free end of each cord is passed through a certain ring, then through the other hole in the runner, and a knot tied.

At the foot of the bed an upright pole is fixed, having a notch cut in its top, which should be 7 feet from the floor; a cord G is fastened to the curtain ring passed over the top of the pole, by pulling on this the leg is raised about 10 inches from the bed, and the cord made fast to the bedstead.

The flannel strips are now adjusted more accurately, and the splint more bent or straightened, as the case may be, so as to bring the axis of the lower fragment exactly into line with the upper. It is at this point that an anæsthetic may be required, it is not often necessary, but reduction of the deformity cannot always be completed without one. Each of the four short cords can easily be adjusted by means of the runners, and should there be any tendency for these to slip, a pin, passed through the cord above, will prevent it.

The foot of the bed should be raised on blocks 6 inches high, and care taken that the end of the splint swings free of ironwork and post. The weight of the limb is the extending force, and the little piece of cord beyond the stirrup is the index of efficient working. It should be always taut.

There are two important points to be borne in mind. The patient must not be allowed to slide down to the foot of the bed, and the top end of the splint must ride an inch clear of the groin. The wire of the splint should not touch the patient at any part. When the fracture is close to the hip joint, very particular attention must be paid to the flannel strips at the top of the splint, as these are the support of the upper fragment. The top edge of the flannel should accurately fit into the gluteal fold, and care taken lest the strips slip down the wire framework. When all the strips are adjusted, they should be sewn on to the splint with thread and the pins removed.

Gentle massage of the thigh, including the seat of fracture, should be started the day after being put up in the splint; this accelerates absorption of extravasated blood, and assists the circulation round the fracture, keeping the muscles from becoming adherent, and maintaining their tone, thus materially shortening the period of weakness for the patient when he begins to first walk about.

There are two disadvantages in the use of this splint; the main one is the necessity for an extension fixed to the leg with strapping; this is sure to drag sooner or later, and requires renewing; also watchfulness is required in order to prevent the strapping from cutting into the skin. The other disadvantage is that the foot and leg are not easy to keep warm in the winter, suspended as they are in mid-air; this can be remedied by keeping up the temperature of the room, by regular massage, and by layers of cotton-wood. Advantages are many:—

(1) The patient can be moved about freely without damage to the fracture, simplifying the nursing; (2) the patient is perfectly comfortable when he gets used to the inclination of the bed; (3) no pressure is exerted upon the site of fracture which can be examined at all times; (4) massage can be begun at once; (5) swelling of the leg is reduced to a minimum by the elevation of the limb; (6) the apparatus is cheap and lasting. Two Hodgen's, right and left, will last a lifetime, and do away with the necessity for a multitude of other splints.

Three kinds of injury to the femur are not suited to treatment by Hodgen's splints; two of them occur in children; the one is separation of

the lower epiphysis, which requires complete flexion for its reduction (Hodgen's splint will not perform its functions if bent beyond a right angle). The other includes all kinds of injury in children too young to lie still, whose limbs are not heavy enough to make a good extending weight; these are best treated by suspension or in Bryant's double splint.

Lastly, fracture complicated by any injury to the leg which prevents the application of a strapping extension; in which case straight wooden splints, like Liston's, must be used, or treatment by position with pillows and sandbags.

A very bad extracapsular fracture, which was so painful that no splint of any kind could be tolerated, treatment being carried out with sandbags and cushions, and a woman, with delirium tremens and alcoholic neuritis, with a simple fracture of the shaft, are the only two cases in my experience in which Hodgen's splint has failed to give a good result."

THE McDOWELL CENTENNIAL.—A notable feature of the annual meeting of the American Gynæcological Society, held in New York recently, was the celebration of the hundredth anniversary of Ephraim McDowell's first ovariotomy. It was doubtless largely owing to their desire to take part in such an interesting commemoration that such eminent European gynæcologists as Mr. Herbert P. Spencer and Mr. Alban Doran, of London, Hofrat Professor Hofmeier, of Würzburg, and Professeur Agrégé Pozzi, of Paris, all busy men, took the time to come to New York for the meeting, before which they presented valuable papers. It was an honor which American physicians will not readily forget.

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The special event in the commemoration was the banquet, held on Thursday evening, and it was a happy thought to arrange that Dr. McMurtry's address should be given after the dinner, at a time when it naturally led to sympathetic remarks by other distinguished men. The choice of Dr. Lewis S. McMurtry, the eminent Louisville gynæcologist, to speak in commemoration of the pioneer ovariotomist, also a Kentuckian, was peculiarly appropriate. Nobody could utter more telling or more graceful sentences concerning McDowell than those that came from Dr. McMurtry.

Few achievements in surgery—perhaps none at all—have had more beneficent results than have followed Ephraim McDowell's early ovariotomies. Sir Spencer Wells's work in demonstrating the tremendous saving of life by ovariotomy is one of the most convincing testimonies to the great advantage which humanity has drawn from the activities of the medical profession, and a work of which we are all proud. It stands almost on a par with the record of Listerism. It was indeed well that the American Gynæcological Society should have made a special point, at its thirty-fourth annual meeting, of celebrating the centennial of McDowell's triumph.—*New York Med. Journ.*

THERAPEUTIC VALUE OF RADIUM.

In introducing the following article to our readers, we wish to call special attention to the fact that latterly radium has been extensively advocated as a therapeutic measure in epithelioma and various skin affections. Since the foreign journals are exploiting the matter in a manner not yet attempted by our own journals, it would seem the time is opportune to bring before our general practitioners a scientific estimate of the value of radium in modern therapeusis. One of the best expressions on the subject is a paper by J. M. H. MacLeod, M. A., M. D., M. R. C. P., which appeared in *The Practitioner* (London) for May, 1909, under the title, "Observations on the Therapeutic Value of Radium, and Its Application."

"At the present time," says Dr. McLeod, "when the attention of the public is being drawn to radium in a fashion which may lead to disappointment, and when exaggerated reports of its healing powers are to be found in the daily press, it will not be inappropriate to consider briefly some results which have been accomplished in the past by it, and to review the recent observations which have been published on its therapeutic value and on the best methods of applying it.

"Even in the early days of radium, soon after its brilliant discovery by Madame Curie, its therapeutic possibilities were recognized. In 1903, if not earlier, it was known that something emanated from the salts of radium which had an exciting action on living tissues, and that if the radium salt were applied to the tissue in a concentrated form, or for a long period, a destruction resulted somewhat similar to that caused by the x-rays. The three main types of radiation from the radium salt had been distinguished, namely, α, β, and γ rays, but the precise action of these on the tissue was a matter of conjecture.

"Through the experiments of my colleague, Dr. Mackenzie Davidson, and subsequently of others in this country, it was found that radium had a selective action on certain diseased tissues, and that it acted beneficially on rodent ulcers, small epitheliomata, and lupus vulgaris. At that time the methods of application of the radium were crude. The salt, which was employed, was the bromide, either pure or mixed with more or less barium. This was applied to the skin in a thin glass tube sealed at the ends, or in a depression on a vulcanite button covered by a thin sheet of mica or aluminum, in amounts varying from 5 to 10 milligrammes. Other forms of 'applicators' were devised for specific purposes; for example a catheter-like tube holder, made with a malleable metal extension, was improvised by the writer to apply the radium in cases of cancer of the throat, uterus, rectum, etc.

"During the first half of 1904, at the suggestion of my colleague, I tried the effect of radium in a number of cutaneous affections in the

Skin Department at Charing Cross Hospital, and, in a paper published in June, 1904, advanced the following tentative opinion regarding its therapeutic value, which it will be of interest to quote in order to compare them with the recent developments of the subject. The radium used then was in the form of radium bromide, and radium barium bromide, in quantities of 5 mg. in tubes, and of a radio-activity of 1,800,000 and 600,000, taking the radio-activity of the same quantity of uranium as unity.

" 'Its chief utility is in the treatment of rodent ulcer, and in the case of a small rodent ulcers it acts almost like a charm. In rodent ulcers of a diameter larger than a shilling, treatment by the x-rays is more practical, as the whole of the ulcer can be exposed at once and not piecemeal as with the small quantities of radium at present at our disposal. In some cases of rodent ulcer, which have been subjected to a long series of exposures to the x-rays, the rays seem to lose their effect and the heal process becomes stationary; then exposure to radium may be used with advantage, and the healing again stimulated.' "

" 'With regard to cancer, further experience is necessary before any definite statement can be made. It is possible that radium may prove a useful adjunct to surgical treatment. In lupus vulgaris, radium causes the disappearance of the granuloma and a replacement of it by healthy scar tissue, but, except in very small lesions, the treatment is not at present practical. It is a useful adjunct to the Finsen light and the x-rays, as it can be applied to positions which are difficult to get at, such as about the eyelids and the mucous membrane of the nose. In the verrucose type of lupus vulgaris it is superior to the Finsen light.' "

"With regard to the permanence of the results, so far as rodent ulcers are concerned, this has been fairly satisfactory. Several of the cases, treated about 1904, which appeared to be healed, have remained sound. In two of them, however, in which no trace of the disease appeared to be left, a recurrence took place in the scar. In one of these a second series of exposures was given, healing again took place with the formation of an apparently healthy scar, but a relapse has since supervened. In the other, excision was resorted to, and the subsequent history of the case has not been obtained. In this connection, Dr. J. H. Sequeira recently demonstrated, at the Royal Society of Medicine, a case of rodent ulcer of the eyelid cured by radium, in 1904, in which the scar had remained sound since then.

"With regard to lupus vulgaris, the early cases have given disappointing results, and recurrences have been usual. In a case of lupus verrucosus of the hand, in a boy, reported as apparently cured, in 1904, a relapse occurred a year later. Radium was again employed with temporary benefit, but, as a further relapse took place, its use was discontinued, and other methods of treatment were employed.

"About this time, another field of utility for radium was opened up by the discovery that it had a selective action on blood-vessels causing

them to disappear. The writer tried its effect on lupus erythematosus, but the results were disappointing. In connection with vascular nævi, on the other hand, the outlook was more promising. The first case of 'port-wine stain,' treated by radium in this country, was that shown by the late Mr. T. J. P. Hartigan, at the Dermatological Society of Great Britain and Ireland, in January, 1904. By means of radium applications, smart localized reactions had taken place, which, on healing, had left patches of pale scar tissue in the midst of the red skin, but, as the blanching had occurred unevenly, the general disfigurement of the lesion was comparatively little reduced.

"Since those early days, great advances have been made with regard to the knowledge of the emanations and radiations from radium, their power of penetration, and the best method of applying the agent to the skin, and these advances have resulted in the main from the patient researches of our French colleagues at the Radium Institute in Paris. Perhaps the two most important factors in this advance of knowledge were: (1) the discovery, in 1905, by M. Danlos, that the action of radium was intensified if the salt were spread by means of a varnish on a flat surface, and so applied to the skin, instead of being placed in a capsule of glass or aluminum, and that, by this means, a much larger surface could be acted upon in an even manner, and (2) the employment of an electroscope, such as that devised by M. Danne, to estimate the radio-activity of the radium specimen to be applied.

"In this way, the science of radium therapy has become almost as exact as Röntgen therapy has been rendered by the invention of the invaluable 'pastille' by Sabouraud and Noiré. The recent papers and cases, published by Drs. Wickham and Degrais, Dominici and Bory, demonstrate the immense value of the improved method of applying it.

"*Mode of Application and Apparatus.*—By means of a special varnish, invented by M. Danne, the composition of which has not been made known, the radium salt is fixed on a flat metal plate, or a piece of stiff linen. This varnish is permeable to almost all the rays, and resists the action of heat, water, vaseline, and antiseptics, such as ordinary solutions of permanganate of potash, and perchloride of mercury, but it is unsafe to expose it to absolute alcohol or ether. The metal plates vary in shape, some being circular, while others are square, oblong, or triangular, and in size from 5 mm. up to 6 cm. square. The pieces of linen vary in size up to several centimetres square. The plates are fixed on handles, some being made to move upon them by means of a pivot. In addition to these, small rods or spheres are employed to carry the varnished radium into cavities. The salt of radium, which is employed for varnishing on those flat surfaces, is the sulphate of radium, which, unlike the bromide, is insoluble. Great care is taken in the spreading and fixing of the salt by the varnish, in order to ensure that it is evenly spread, and that each centimetre of surface has 1 centigramme spread on it. The radium sulphate may be employed pure, *i. e.,* with a radio-

activity of 2,000,000, but, more usually, it is diluted by mixing it with barium sulphate, so as to reduce the radio-activity to 500,000 or less. In the choice of the apparatus to be employed in an individual case, not only are the weight of the salt of radium employed, its radio-activity, and the total dimensions of the surface, over which it is spread, taken into consideration, but also the percentage of the α, β, and γ rays emitted by it.

"This mode of application has two advantages over the older method of applying it; first, by it the maximum effect of the radium salts on the tissue can be obtained, certain weakly penetrating rays not being cut off by the screen of glass or mica, and, second, and more important, a much larger radio-active surface is obtained. It has been estimated that, with the radium salt varnished on a flat surface, the effect on the tissue is much greater than if the same amount of salt were applied in a glass tube, and that, with the salt spread out, 1 c.grm. of radium salt of an activity of 100,000 has approximately the same effect as 5 c.grm. of a salt of an activity of 600,000 enclosed in a glass tube.

"The varnished surface is not applied directly to the skin, but often with the interposition of a thin layer of gutta-percha to protect it from moisture or discharges, or various screens, consisting of thin aluminium, lead, ebonite, or a layer of wadding 1 cm. thick covered with gold-beater's skin, etc., are interposed to cut off the less penetrating rays. By the latter method several brilliant results have been obtained. The α-rays are the least penetrating, and are cut off by the thinnest sheet of mica, aluminium, or glass, the same substances cut off the softer β-rays, while hard β-rays pass through them. The γ-rays are the most penetrating, and can pass through lead 4 cm. in thickness. It is these highly penetrating γ-rays which have the most powerful selective action on diseased tissues, while the softer, less penetrating rays have a less discriminating destructive effect, and are more potent in causing superficial inflammatory reaction.

"For example, in a case of epithelioma of the lip, successfully treated by Dominici and Bory, a circular piece of linen 3 cm. in diameter, with 1 c.grm. of radium sulphate, mixed with 3 c.grm. of barium sulphate varnished upon it, and a radio-activity of 500,000, was applied to the lesion. But between it and the skin were interposed a layer of gutta-percha 1-10 mm. thick, a sheet of lead ½ mm. thick, 8 rounds of papers, 2 layers of gutta-percha, and 2 pieces of plaster. In this way, the tumour was subjected to an irradiation exclusively composed of γ-rays of an activity estimated at 4,500, and the secondary radiation, produced by the rays passing through the lead, was intercepted by the paper.

"In order to avoid getting an excessive action on the surface of raised lesions by repeated or prolonged exposures, Wickham and Degrais have introduced the method of application, which they have graphically named the method of 'Feu croisé,' and which consists in placing two or more flat 'applicators' opposite each other on the tumour, so as to sub-

ject the deeper parts of it to the 'crossed fire' of penetrating rays from the different 'applicators.'

"It would seem, at the present time, that the more important advantage of the French method of applying radium over the older methods is that, owing to the radium salt being evenly spread over a relatively large area instead of being collected in small bulk in a tube, a larger radio-active surface is obtained with the same quantity of radium, and the total output of rays available to act on the tissue is greatly increased. The presence of a thin layer of mica or aluminium, cutting off the weakly-penetrating x-rays, may yet prove to be no disadvantage, as is seen in Dominici and Bory's case of epithelioma, where only highly-penetrating rays were employed. In this country, till recently, it has been the bromide of radium which has been used for therapeutic purposes, and, as this salt is soluble, certain difficulties are presented in varnishing it on a flat surface. These difficulties can, however, be overcome, short of having the bromide transformed into the insoluble sulphate, by the simple expedient of having the bromide crushed down and evenly spread and pressed between a flat metal surface and a thin mica or aluminium window. In this way 'applicators' of different shapes and extent of surface can be constructed in which definite quantities of radium bromide, either pure or diluted in different proportions with varium bromide, are spread over a given surface. I have had such an applicator made and it is giving satisfactory results.

"*Time of Application.*—The time of application of a specimen of radium depends on various factors, such as the radio-activity and amount of the salt applied, the extent of surface on which it is spread, the percentage of the different rays, the presence of some such screen, as lead or aluminium, between it and the tissue, and the diseased condition for which it is applied. In the early cases, the time was estimated in an approximate manner by applying the specimen of radium to one's own forearm, or to that of the patient, and observing how long it took to produce a mild reaction, and, in estimating the time of exposure in an individual case, Wickham and Degrais still advocate the simple expedient of employing a preliminary tentative exposure of the tissue. Experience has taught certain lessons, however, which are a guide in this matter. It has been found that 5 m.grm. of pure radium sulphate, varnished on a flat surface of 1 c.m. square, when applied directly to the skin for 20 minutes, can produce a severe reaction with ulceration, the same result being obtained by three applications of 10 minutes' duration on consecutive days, and also that 2 c.grm. of sulphate of barium radium of a radio-activity of 500,000 requires an application of 40 minutes at one sitting to cause ulceration.

"In the treatment of vascular nævi, a curative effect can be obtained without the production of marked reaction, which, on account of the scar it leaves, is to be carefully avoided, a slight reaction, however, being no disadvantage. Using a flat round plate 6 cm. in diameter, over which

is varnished 2 c.grm. of sulphate of barium radium of an activity of 500,000 with 10 per cent. α, 87 per cent. β, and 3 per cent. γ rays, Wickham and Degrais, in the case of pale 'port-wine stain,' found that the direct application to the skin should be one hour in two seances, while, in the case of deep violet nævi, that it should be two hours in two seances. In the case of raised angiomata, and still more in that of rodent ulcer and epithelioma, the time of application might be safely increased.

"On the other hand, when the α and soft β rays are screened off by aluminium or lead, much longer applications may be given; in Dominici and Bory's case of epithelioma, for example, in which all but the γ rays were excluded, and the external radio-activity was only 4,800, an exposure of six consecutive days was given, the radium specimen being applied continuously during that time except at meal times.

"It is impossible to lay down hard-and-fast rules with regard to the time of exposure, and these figures are simply quoted as a guide. The length of exposure, as well as the precise method of application in a case, are subjects of such infinite importance, both with regard to the permanence of the result and the cosmetic appearance of the scar, and vary so much in different cases that they must be left largely, as in the case of the x-rays, to the experience and judgment of the operator.

"*Action of the Radiations from Radium on Diseased Tissues.*—The rays from radium have a selective action on certain diseased tissue elements, affecting them much more powerfully than they do healthy tissue, and eventually causing their destruction. The types of cells, on which they have the most marked action, are the comparatively weakly resistant cells of rodent ulcer, and various other pathological conditions of the epidermis, such as epithelioma of the skin and warty growths. Their destructive action has also been proved to be great in the case of the cells of epithelioma of the lip and mouth. On the cells of cancer, growing from the epithelium of the œsophagus, uterus, bladder, etc., the destructive action on the diseased tissue has not been so marked, but this may be regarded, quite reasonably, as due to the difficulty of reaching such growths, of watching and controlling the applications, and to the great rapidity of the malignant proliferation in these situations, as compared with that which occurs in rodent ulcer.

"In the case of granulomatous cells, such as those of tuberculosis cutis, the destructive action of the rays, though definite, is considerably less than on pathological elements of epidermal origin, and in this they closely correspond with that of the x-rays. This is probably dependent on the fact that the effect of the rays is greatly diminished by having to pass through the epidermis, and suggests the application of long exposures to highly penetrating rays. The rays have also a definite and selective action on blood-capillaries, destroying them, and hence their value in the treatment of angiomata. This action, according to the researches of Dominici and Barcat, is brought about in the following manner: The white fibrous and elastic tissues of the corium and blood-

vessel walls disintegrate, and, at the same time, the fixed cells undergo a reversion to an embryonic state. In this way, the angiomatous tissue is replaced by numerous embryonic cells with a few contracted capillaries and blood spaces among them. By the proliferation and evolution of these embryonic cells, a new and healthy connective tissue gradually becomes built up.

"All three types of rays act on the skin, the harder and more penetrating the rays the more selective the effect. The soft weakly penetrating rays, such as the α and soft β rays, tend to cause superficial destruction, and hence the advisability of cutting them off in all cases in which it is important to avoid ulceration and subsequent scarring.

"Another definite effect of the radium rays is that on the sensory nerve terminations, for, like the x-rays, they not only allay itching, but also relieve pain. The bactericidal action of the radium rays is slight and is probably dependent on the α rays.

"At the time of application of the radium, no definite sensations or signs of inflammation are produced, and it is, as a rule, only after the lapse of 10 to 14 days that the characteristic reaction sets in. This is associated with all the signs of inflammation, which may be limited to the lesion itself, or, if a powerful reaction occurs, it may spread to the neighbouring skin. In a marked reaction, oozing takes place, and a scale or more or less firm scab, forms, in some cases not unlike a rupial crust, which separates naturally in two to four weeks, when another scab may form, or the lesion may have dried up and appear to be completely healed. When the application has been excessive, signs of reaction may appear much earlier, and erythema may be noticed in 24 hours. Vesicles then appear which dry up to form a scab, which falls off in a week or ten days, leaving a superficial ulceration. This heals slowly, leaving a scar which is red, smooth, and presents telangiectases like the scar of an x-ray burn. The radium reaction is probably the result of an inflammatory process caused by the toxic effect of the dead tissue elements, which have been killed by the rays, acting on a tissue partially devitalised by the same rays.

"In addition to the rays, which are given off by the radium, emanations in the nature of a gas are also emitted, which confer radio-activity on substances with which they come in contact. These emanations may play an important part in the future developments of radium therapy.

"Diseased Conditions Which Have Been Cured or Benefited by Radium.—So far the field of utility of radium in the curing of disease as been a limited one, and it is in the case of certain skin affections, such as rodent ulcer, epithelioma, keloid, and various forms of vascular nævi, that the most striking results have been obtained.

"Rodent Ulcer.—In the experience of almost everyone, who has employed radium for the treatment of rodent ulcer, there is no remedy which gives such brilliant results as it does. Having applied it at Charing Cross Hospital and in private practice, since 1904, in a considerable

number of cases with the comparatively small quantity of radium at my disposal, I can fully endorse this view. Relapses have certainly occurred in several cases, but they have been either in cases of such an advanced type, involving large areas and extending down to bone, that the quantity of radium was inadequate to thoroughly deal with them, or in which the exposures were insufficient, and the patient, failing to report himself when recurrence showed itself, allowed the disease to assume serious developments before being seen again.

"There appears to be in the radiations from radium something which is more selective in its action on rodent ulcer than the rays from an x-ray tube, for cases, in which healing has gone on up to a certain point with the x-rays and come to a standstill, have begun to heal again when radium was applied.

"*Epithelioma.*—Epitheliomata of the skin are also capable of being cured by radium, though not so easily as rodent ulcers, since the cells composing them appear to be more resistant to the radiations than those of rodent ulcer.

"Several cases have been lately reported, in which epitheliomata of mucous membranes, such as the lip and tongue, have also resolved under this treatment. This is an observation of great importance, as it is a general experience that the x-rays have a feeble action on this type of growth. In the case already referred to, which was recently published by Dominici and Bory, an epithelioma of the lower lip, the size of a 5-franc piece, in a man, aged 67 years, was cured by means of radium. The treatment was begun on the 9th of January, 1908, and, by the 25th of February, it had gradually receded till nothing was left but a supple cicatrix which was slightly indurated towards its outer angle.

"*Vascular Nævi.*—All forms of vascular nævi have been treated, more or less successfully, by radium, and the statistics published by Wickham and Degrais, based on 101 cases, show that, by this treatment, results can be obtained which are superior to those obtained by any other means at present at our disposal.

"By weak doses of radium, frequently repeated, raised angiomata completely dry up and become decolourised, leaving a pale, supple scar, and this can be accomplished without the production of any marked reaction. This method has a great advantage over excision, electrolysis, and the actual cautery, since it is painless, and can be done while an infant is asleep.

"It is in 'port-wine stain,' however, that the most striking results have been obtained, for, up to now, these lesions have been the despair of surgeons, and any treatment adopted, if successful in destroying the nævoid tissue, usually resulted in the production of scarring, which was as disfiguring as, if not more so than, the disease. By means of repeated doses of radium, just sufficient to produce a slight reaction, and no more, the red or purple tint of the nævus has been greatly diminished and the colour gradually reduced, so as to approach that of the surround-

ing skin, without the production of a scar. These results have been obtained by Wickham and Degrais, not only in superficial nævi, but in those in which the whole thickness of the cheek was involved. Of course a treatment such as this, to be successful, requires great care and experience, and, if the nævus is extensive, occupies a considerable time, as the whole diseased surface may have to be gone over repeatedly piecemeal.

"*Pigmented and Hairy Moles* have also proved to be amenable to some extent to this form of treatment, with the destruction of the hairs and the diminution of the pigment.

"*Seborrhoic Warts and Papillomata* resolve under it, as they do in most cases under the x-rays.

"In the case of deep-seated *cancer,* my experience at Charing Cross Hospital has so far been disappointing, and all that has been accomplished has been to relieve pain to some extent, and to retard, but not arrest, the progress of the disease. It is unfair, however, to base any conclusion on these results, as the amount of radium employed was insufficient to effectively deal with the diseased tissue. Recently, several cases have been reported from Paris, in which striking improvement was obtained, but it is too soon to judge of these results, and it is well, while continuing experiments, to keep an open mind on this all-important subject. Still, the outlook, where the lesion is so situated that the radium can be applied satisfactorily, and a sufficient quantity of radium is available, is distinctly encouraging.

"*Tuberculosis Cutis.*—With regard to the treatment of the various forms of lupus vulgaris, our experience with radium has been disappointing. It was found possible to cause the apparent disappearance of nodules of lupus by the radium, but in nearly every case recurrence supervened. In the case of lupus, affecting the mucous membranes of the nose and mouth, temporary improvement occurred after applying radium, but relapse quickly took place. This was specially disappointing, as those situations, being difficult to reach by other methods of radio-therapy, seemed admirably suited for radium treatment. The best results were obtained in the case of lupus verrucosus, but even in this, although it caused the warty superstructures to disappear, and apparently cured the underlying granuloma, the improvement was only temporary. The action of radium in lupus somewhat corresponds with that of the x-rays, and so far is not comparable, in its efficacy, with that of the Finsen light."

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

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EDITORIAL

THE FIFTY-SECOND ANNUAL MEETING.

The fifty-second annual meeting of the State Association closed its three days session in Jefferson City on May 20, after a very successful and harmonious gathering, with a registered attendance of 350 members. The House of Delegates disposed of the business affairs of the Association in excellent time, and everything of importance was attended to on the first day of the meeting. The report of the defense committee was read at this session and its recommendation that legal defense be made a permanent privilege of membership, was adopted by accepting the amendment to the by-laws introduced at the last annual meeting. The report reflected great credit upon the members of the committee for the manner in which they conducted the suits brought against some eight members who applied for assistance from the Association. One of the cases was dismissed and the others were continued, with a likelihood that most, if not all of them, will be dropped before going to trial. The committee reported that it had discharged its duties without expending any of the money ($500) appropriated at the last meeting to defray the expense of conducting the defense of members sued, and returned the entire sum to the general fund of the Association. This highly gratifying execution of its duties was made possible for the committee by the friendly coöperation of Mr. Morton Jourdan, of St. Louis, the Association's legal adviser, who offered his services

gratuitously, and thus has placed the Association under renewed obligations. For the ensuing year the sum of $1,000 was appropriated for the use of the defense committee and the old committee was reappointed to serve for another year.

The committee on public policy and legislation reported that five bills had passed the legislature and will become laws: Of these the most important is the bill for the collection of vital and mortuary statistics. When the provisions of this bill have been put into operation and satisfactorily carried out, Missouri will be included in the list of registered states whose reports of vital statistics are accepted by the United States Census Department as adequate and reliable for purposes of statistical compilation. Thus far only sixteen states have been accorded this recognition by the Census Department.

The bill which requires appeals from the action of the State Board of Health in revoking licenses, provides that these appeals shall be taken on a writ of certorari and that the license of the defendant shall stand revoked until the court has annulled or otherwise quashed the action of the Board of Health. The new State Board of Health, therefore, will have greatly increased power in the suppression of illegal practices by quacks and charlatans.

Besides these actual successes in securing new laws and in amending old ones, we should feel extremely proud of the intelligent and politic work of the committee in preventing the passage of all adverse medical legislation. Numerous bills were drafted and pushed, some of which if passed would have pulled down our standard of practice from the high plane to which it has been raised by the unceasing, unselfish and constant efforts of those who believe in the doctrine of higher medical education.

The reports of the committee on medical education and of the committee on tuberculosis were highly interesting and instructive, and showed that rapid progress is being made in the advancement of the standard of medical education and in the control and prevention of the spread of tuberculosis. All these reports will be published in full in our July issue, and we commend them to the careful attention of every member.

The scientific sections were well attended and a large proportion of the papers announced in the official program were read and discussed.

The officers for 1909-1910 are as follows: President, Dr. Tinsley Brown, Hamilton; vice-presidents, Dr. J. M. Bell, St. Joseph; Dr. J. A. Harris, Mt. Vernon; Dr. H. G. Shobe, Paris; Dr. B. W. Hays, Jackson; Dr. J. L. Thorpe, Jefferson City; secretary, Dr. A. W. McAlester, Jr., Kansas City; treasurer, Dr. J. Franklin Welch, Salisbury. Medical Section: Chairman, Dr. Franklin E. Murphy, Kansas City; secretary,

Dr. W. R. Patterson, Tipton. Surgical Section: Chairman, Dr. Willard Bartlett, St. Louis; secretary, Dr. Leo Rassieur, St. Louis. Eye, Ear, Nose and Throat Section: Chairman, Dr. John Green, Jr., St. Louis; secretary, Dr. Clarence Loeb, St. Louis.

DR. McCORMACK'S TOUR.

Dr. McCormack's tour through the State was attended with marked enthusiasm in every town which he visited. His lecture was a revelation to many people, doctors as well as others, and the impression left upon his hearers will undoubtedly aid greatly in strengthening the spirit of friendly coöperation of the public with the medical profession in accomplishing the many reforms for the improvement of hygienic and sanitary conditions of the people in both public and private life.

The peculiar ethics which form the principles of medical practice—a code differing so essentially from the principles of conduct governing every other profession and calling that it is difficult for the non-medical person to understand its application—commands the physician to devote himself to the relief of the physical and mental sufferings of his fellow-men, without regard to his own welfare. The prevention of disease is a perfectly natural step for the profession to take, from the physician's standpoint, following the discoveries of the causes of disease, notwithstanding the fact that the dissemination of such knowledge can only result in a curtailment of the source of the physician's income. In his lectures Dr. McCormack makes this matter plain to the people, and there is therefore a growing sentiment of deeper and greater faith on the part of the people in the doctrines of higher medical education and better sanitary and hygienic laws; and a closer affiliation between the profession and the people.

The success of Dr. McCormack's tour has been very pronounced; in all places he was greeted by large audiences and the people seemed pleased to learn that they could do something towards preventing many of the diseases that now afflict them. The county societies and the district councilors succeeded most admirably in arousing the interest of the people in the lectures, and are to be commended for the activity shown in connection with this campaign of education. Without their hearty coöperation and a great deal of preparatory work in announcing the visits of Dr. McCormack, and the character of the address which he would deliver, there would not have been the intense interest and general enthusiasm which were so evident in all the audiences that heard the lectures.

EDITORIAL NOTES

School Hygiene.—Dr. John J. Cronin is conducting a lecture and laboratory course in School Hygiene and Sanitation at the New York Post-Graduate Medical School.

At the Recent Meeting of the State Anatomical Board in Jefferson City, provision was made authorizing the Secretary of the State Anatomical Board to furnish dissecting material so far as possible to those county societies who may desire this material in connection with their post-graduate class work. For details in regard to this matter, inquiries should be addressed to Dr. C. M. Jackson, Secretary, State Anatomical Board, Columbia, Mo.

The officers of the Board for the coming year, elected at the recent meeting, are as follows: President, Howard Hill, Kansas City; vice-president, D. M. Shoemaker, St. Louis; secretary, C. M. Jackson, Columbia; treasurer, R. J. Terry, St. Louis.

Since February 25, the Council has acted on the following products:

Articles accepted for N. N. R.:

Enzymol (Fairchild Bros. & Foster).
Sabromin (Farbenfabriken of Elberfeld Co.).
Medinal Tablets, 5 grains (Schering & Glatz).
Pituitary Substance (Anterior Lobe) (Desiccated) Armour & Co.
Pituitary Substance (Posterior Lobe) (Desiccated) Armour & Co.
Parathytoid Gland (Desiccated) (Armour & Co.).
Arsacetin (Victor Koechl & Co.).
Urethan "Hoechst" (Victor Koechl & Co.).
Soamin (Burroughs, Wellcome & Co.).
Tabloid Soamin (Burroughs, Wellcome & Co.).
Bile Salts (Fairchild Bros. & Foster).
Iodone Surgical Dressing and Dusting Powder (Henry C. Blair Co.).

Articles accepted for N. N. R. Appendix:

Compressed Tablets Anesthesin 2½ grains (Sharp & Dohme).
Solution Atoxyl 10% (Sharp & Dohme).
Solution Atoxyl 10% with Novocaine 1% (Sharp & Dohme).

Compressed Tablets Atoxyl and Quinine Comp. (Sharp & Dohme).
Compressed Tablets Benzosol 2½ grains (Sharp & Dohme).
Compressed Tablets Benzosol and Codein (Sharp & Dohme).
Compressed Tablets Blaud with Atoxyl (Sharp & Dohme).
Compressed Lozenges Orthoform, 1 gr. (Sharp & Dohme).
Compressed Tablets Pyramidon 1½ gr. (Sharp & Dohme).
Elixir Duozyma (Louisville Pharm. W'k's).

Articles reconsidered and rejected:
Salit (Heyden Chemical Works).

Transfer of Agency:
Stovaine (formerly sold by Walter F. Sykes, New York, now sold by the Parmele Pharmacal Co.).

Sixteenth International Medical Congress to be held in Buda-Pesth, Hungary, August 29 to September 4, 1909. Preliminary program of the tours arranged for American delegates. As a large number of American physicians will attend the Sixteenth International Medical Congress to be held in Buda-Pesth, the following itineraries have been arranged to enable the journey to be made with the maximum of comfort and enjoyment, at fixed inclusive fares:

Tour A provides for a direct trip, with short visits to Paris and Vienna, in addition to the stay in Buda-Pesth during the session of the Congress, with return to New York via Berlin and Hamburg.

Tour B presents an opportunity of combining a visit to Great Britain, Paris and some of the points of scenic interest in Switzerland with the opportunity of returning direct from Buda-Pesth to New York.

Additional security, and consequently added pleasure, will be obtained by thus traveling as a congenial party of physicians and their families, with a conductor thoroughly conversant with the route, languages and customs of the countries to take charge of the details of travel.

A number of desirable rooms have been especially reserved at the Hotel Hungaria, Buda-Pesth, for the American party, but as the accommodations are limited, prompt reservation is urged on the part of those who contemplate attending the Congress, in order to secure the best rooms. Board at this excellent hotel is included in the price of the round trip ticket, covering the entire session of the Congress.

Physicians desiring to visit the hospitals and clinics in Berlin, Vienna, Paris and London, will be afforded an opportunity to do so, and special programs will be provided for this service.

Members of either section of this party desiring to remain longer on the Continent, or to return home by different routes, will be per-

mitted to do so, provided this fact is made known before sailing from New York.

The business arrangements of the tour have been placed, as before, in the hands of Thos. Cook & Son, the well-known Tourist Agents, which insures perfect and complete service for the trip, and relieves passengers from all troublesome details incident to foreign travel. Those delegates who attended the last meetings in Madrid and Lisbon will remember the excellent service afforded them. For further information apply to Chas. Wood Fassett, M. D., Krug Park Place, St. Joseph, Missouri.

COUNTY SOCIETY NOTES

ATCHISON COUNTY MEDICAL SOCIETY.

The Atchison County Medical Society met in special session at Tarkio, April 22. Those present were: Dr. J. W. Holliday, President; Dr. A. McMichael, Secretary; Dr. J. A. Hunter, Treasurer; Dr. J. A. Postlewaite, Dr. C. M. Waugh, Dr. W. G. Safford, Dr. G. E. McBride, Dr. E. P. Taylor. Dr. Nickle of Iowa also met with the Society.

After disposing of the regular routine of business, Dr. J. W. Holliday read a lengthy paper on the subject of "Empyema," which subject was handled by him in a very able manner.

Dr. W. G. Safford was elected delegate to the meeting of the State Medical Association.

After short talks by various members, the Society adjourned to meet in Rockport on the first Thursday in July.—A. McMichael, M. D., Secretary.

BENTON COUNTY MEDICAL SOCIETY.

The Benton County Medical Society met in Warsaw, April 27, with the president, Dr. H. G. Savage, in the chair. Members present were: Drs. H. G. Savage, Marion Dillon, S. O. Stratton, E. F. Haynes, G. A. Greeson, R. L. Pomroy and J. R. Smith.

Drs. E. F. Haynes and R. S. Battersby were elected to membership.

Dr. H. G. Savage read a paper entitled "The Relation of Adenoid Vegetations and Enlarged Tonsils to the Growth and Development of Children Mentally and Physically," which was very interesting and was thoroughly discussed by all the members present.

Dr. S. O. Stratton presented a clinic which was also very interesting. This was followed by a discussion on how to check hemorrhage from the nose, and the advantages and disadvantages of certain preparations used.

The Society adjourned to meet in Lincoln some time in June, at the call of the president, at which time a paper will be read and discussed and a general clinic will be held.—Marion Dillon, M. D., Secretary.

CALDWELL COUNTY MEDICAL SOCIETY.

The second quarterly meeting of the Caldwell County Medical Society met in Hamilton, April 21st, Dr. R. L. Mount, president, in the chair. The attendance was good. Dr. C. M. McConkey, of Lathrop, Drs. Reynolds, Cross and Lichtenburg, of Kansas City, were present and were accorded the privilege of the Society.

Dr. R. O. Cross read a paper on "Tuberculosis," which dealt with the cause and prevention of the disease. The paper was discussed by most all present.

Dr. W. T. Reynolds read a paper on "Tuberculosis of the Kidney," with report of cases. The paper was extensively discussed.

Dr. J. S. Lichtenburg gave a talk from his clinical notes on various diseases of the eye.

Dr. Tinsley Brown read a paper on "Abortion," with a report of a number of cases, which illustrated the many complications met with in practice.

The next meeting will be held in Kingston in July, and the following were appointed as essayists: Drs. Leeper, Goins, Gartside, Scanlon, Smith and Lindley.—TINSLEY BROWN, M. D., Secretary.

CHARITON COUNTY MEDICAL SOCIETY.

The Chariton County Medical Society held its regular monthly meeting at Salisbury, May 13th, with ten members present. We were glad to have with us Dr. Lewis, of Sumner, who has never before attended a meeting. The application of Dr. J. W. Conard, of Sumner, was read and on recommendation of Dr. A. W. McAlester, Jr., of Kansas City, the doctor was duly elected to membership.

The committee appointed to draft a schedule of professional fees was, on motion of Dr. McAdam, continued until our next regular meeting.

A very interesting clinic was presented by Dr. McAdam, a child two and a half years of age with infantile spinal paralysis; both lower limbs were paralyzed. The case was diagnosed as anterior poliomyelitis, probably from malarial infection, and elicited an interesting discussion.

The Society then adjourned to meet in Brunswick, June 10.—C. A. JENNINGS, M. D., Reporter.

HENRY COUNTY MEDICAL SOCIETY.

The Henry County Medical Society held a meeting on Friday, May 21st, the president, Dr. W. H. Gibbins, presiding. Those present were: Drs. Gibbins, Britts, Jones, Beaty, Smith, McNees, Peelor, Galbreath, Jennings, Nichols, Netherton, Derwent and Douglass.

Dr. McCormack, of Kentucky, addressed the members with reference to the duties imposed upon them when becoming members of a county medical society. He pointed out the fact that by helping to maintain a society, by regular attendance and by participating in its meetings, they could make this work quite as important as a postgraduate course. Dr. McCormack said the papers read and discussed, the quizes following the reading and discussion, the presentation of patients and specimens, analyses of the excreta, could all be done in the county society and be as valuable for each member as similar work in a course at some school. He related instances where the members of county societies had inaugurated such methods with very great benefit to all. The suggestion was received with much enthusiasm and the

following committee appointed to draft a course and report at the next meeting, Wednesday, June 16th: Drs. Peelor, McNees and Douglass.—F .M. Douglass, M. D., Reporter.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

The St. Joseph-Buchanan County Medical Society held its regular meeting on Wednesday evening, May 12, 1909, the president, Dr. J. M. Doyle, in the chair.

Drs. B. B. Simmons and W. S. Fast were elected to membership in the Society.

The application of Dr. F. G. Thompson for membership was read and referred to the Censors.

The paper of the evening was read by Dr. C. H. Wallace; title, "Unilateral Hematogenous Infection of the Kidney, With Report of Operative Cases." The discussion which followed was participated in by Drs. P. I. Leonard, Jacob Geiger, L. S. Long, L. A. Todd, R. Willman, O. G. Gleaves.

The Secretary called attention to the State Society meeting at Jefferson City, and the advisability of extending a cordial invitation to meet in St. Joseph in 1910. Dr. Wallace offered a motion to the effect that the delegates be instructed to invite the State Society to hold its next meeting in St. Joseph. Seconded by Dr. Kenney and carried.

The Secretary moved that a committee be appointed to report the proceedings of the State Society at our next meeting. Seconded and carried. The chair appointed Dr. W. B. Deffenbaugh on Surgery; Dr. O. G. Gleaves on Medicine; Dr. P. I. Leonard, Eye and Ear, and Drs. Ballard and McCoy on "Good of the Order."

Upon motion, the Society adjourned to the banquet hall, where refreshments were served, and a pleasant evening was spent in social intercourse.—Chas. Wood Fassett, M. D., Secretary.

BOOK REVIEW

Practical Medical Series: Surgery. By John B. Murphy, M. D., of Chicago. Year Book Publishers, Chicago. Two volumes. Price $2.00 per volume.

We find embodied in these two volumes articles covering the advancement of general and special surgery, most of it having been taken from the best of our journals. To the practitioner or student who wants to check up the year's advancement in any special line, the Practical Medical Series will be found invaluable.

ARTICLES APPROVED BY THE COUNCIL ON PHARMACY AND CHEMISTRY.

Actions and Uses.—Phenocoll hydrochloride is similar to acetphenetidin (phenacetin) in its effects and acts as an antineuralgic and antipyretic. It is claimed by some observers to be less depressing than other coal tar antipyretics and is said to be prompt in its antipyretic action. It has been asserted to have an antiperiodic action and to be efficient as a substitute for quinine in malaria and free from unpleasant by-effects. In somewhat larger doses than are usually employed it is said to have a beneficial action in rheumatic fever. Dosage.—0.3 to 1.3 Gm. (5 to 20 grains) in powder, dissolved in water before taking; hypodermically, in 0.25 to 0.5 Gm. (4 to 8 grains) doses. Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering & Glatz, New York).

POLLANTIN (FALL).

An antitoxic serum from horses treated with pollen toxin derived from ragweed.

Actions and Uses.—It has no pharmacologic action except the neutralization of the pollen toxin. The serum is not intended for use hypodermically. It is employed for the relief of hay fever; it may be used as prophylactic. Dosage.—One drop should be instilled by means of a pipette into the outer angle of each eye and one or two drops into one nostril, the other being kept closed, every morning before rising. If the first application causes sneezing or reddening of the mucous membrane of the eye, it is recommended to repeat the application, even for the fourth time, if necessary. Manufactured by Schimmel & Co., Miltitz, near Leipsic. (Fritzsche Bros., New York.)

POLLANTIN POWDER (FALL).

A powder obtained by evaporating, *in vacuo*, pollantin serum derived from ragweed toxin at about 45° C. (113° F.) and mixing with sterilized sugar of milk.

Actions and Uses.—The same as those of the liquid. Dosage.—The powder is applied to the eyes by dusting on the conjunctiva and to the nose by snuffing into one nostril, the other being closed, a piece as large as a lentil. Manufactured by Schimmel & Co., Miltitz, near Leipsic (Fritzsche Bros., New York).

PURGATIN.

Purgatin, $C_{14}H_5(OH)\ CH_3COO_2)O_2{=}C_{18}H_{12}O_7$, is the diacetyl ester of trihydroxyanthraquinone (anthrapurpurin).

Actions and Uses.—It is a laxative, said to be free from by-effects. Being insoluble in dilute acids, it passes unchanged into the intestinal tract, where it is slowly split up and produces painless peristalsis. The urine behaves as it does after the ingestion of rhubarb. It has a reddish color and reduces Nylander's reagent. Purgatin is recommended as a mild laxative. Dosage.—0.5 to 2 Gm. (7 to 30 grains), according to individual idiosyncrasy, in powder, capsules or tablets, taken at night. Manufactured by Knoll & Co., Ludwigshafen a. R. and New York.

PHENOCOLL HYDROCHLORIDE.

Phenocoll hydrochloride, $C_6H_4.OC_2H_5NH(CH_2NH_2.CO)HCl{=}C_{10}H_{14}O_2N_2.HCl$, is the hydrochloride of a synthetic base produced by the combination of phenetidin (paraamidophenetol) and glycocoll (amidoacetic acid). Phenocoll, $C_6H_4.OC_2H_5.NH(CH_2CH_2.CO)$, differs from acetphenitidin (phenacetin), $C_6H_4.OC_2H_5.NH(CH_3.CO)$, only in that one hydrogen atom in the acetyl group has been replaced by the NH_2 group.

SAL ETHYL.

Ethyl salicylate, $C_2H_5(C_6H_4.OH.COO)=C_9H_{10}O_3$, is the salicylic acid ester of ethyl alcohol and is analogous to methyl salicylate (oil of wintergreen).

Actions and Uses.—Sal ethyl has the same action as the salicylates, but is said to be less toxic. Dosage.—3 to 6 c.c. (5 to 10 minims) 3 or 4 times a day in the form of gelatin globules. Manufactured by Parke, Davis & Co., Detroit, Mich.

SALIFORMIN.

Saliformin $(CH_2)_6N_4.C_6H_4.OH.COOH$, is the salicylate of hexamethylenamine.

Actions and Uses.—Saliformin is a genito-urinary antiseptic and is recommended as a uric-acid solvent. Its action does not differ materially from that of a mixture of hexamethylenamine and salicylic acid, for it is largely hydrolysed into its constituents in the presence of water. It has been recommended in cystitis, lithiasis and bacterial affections of the urinary passages; also in gout, etc. Dosage.—0.3 to 2 Gm. (5 to 30 grains) in tablets or elixir. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

SALIT.

Salit consists chiefly of the salicylic acid ester of borneol, $C_6H_4.OH.CO(C_{10}H_{17}O)=C_{17}H_{22}O_3$.

Actions and Uses.—Salit is absorbed by the skin after inunction and is decomposed in the body, liberating salicylic acid in the tissues. It appears to be liable to produce some local irritation and eczema of a mild type. It is antiseptic. It is recommended in gout, articular and muscular rheumatism, neuralgia, erysipelas, pleurisy, etc. Dosage.—It is used only externally, undiluted, by penciling, or preferably by inunction with 5 to 10 Gms. (75 to 150 minims) of a mixture of equal parts of salit and olive oil. Manufactured by The Heyden Chemical Works, New York.

SALOPHEN.

Salophen $(C_6H_4.OH.COO).C_6H_4NH.(CH_3CO)$, is the salicylic ester of 1,4-acetaminophenol, $C_6H_4(NHCH_3CO)(OH)$.

Actions and Uses.—The actions of salophen resemble those of phenyl salicylate (salol). It is not changed in the stomach, but is broken up in the intestine, liberating salicylic acid and acetylparamidophenol, which is not toxic, like phenol. It acts as an antirheumatic, antipyretic, antiseptic and analgesic. It has been recommended in rheumatism, gout, typhoid fever, and as an intestinal antiseptic, in diarrhea and dysentery. Externally it has been applied in psoriasis and other itching skin diseases. Dosage.—0.3 to 1 Gm. (5 to 15 grains), in powder, wafers or capsules. Externally in 10 per cent. ointment. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

SALOQUININE.

Saloquinine, $C_6H_4.OH,COO(C_{20}H_{23}N_2O)=C_{27}H_{28}O_4N_2$, is the salicylic ester of quinine, containing 73.1 per cent. of quinine.

Actions and Uses.—It is a tasteless substitute for quinine and salicylic acid. Dosage.—0.5 to 2 Gm. (8 to 30 grains). Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Merck & Co., New York).

SALOQUININE SALICYLATE.

Saloquinine salicylate, $C_6H_4.OH.COO(C_{20}H_{23}N_2O)+C_6H_4OH.COOH=C_{34}H_{34}N_2O_3$, is the salicylate of the salicylic ester of quinine.

Actions and Uses.—It is recommended in acute rheumatism, neuralgia, tabes, gonorrheal inflammations, etc. Dosage.—1 Gm. (15 grains). Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

INDEX

SUBJECT.	AUTHOR.	PAGE.
A		
Abdomen, post-operative gas distention of	Moenninghoff	193
Address before the Southeast Medical Association	Eaton	103
Air passages, upper, inflammation of	Statler	756
Amputations above shoulder joint	Halley	25
Anæsthesia, general	Farrell	30
Angina pectoris	Murphy	136
Ano, fissure in	Coffey	553
Annual meeting, 1909		708, 776
Antituberculosis campaign, universities and colleges as factors in	Miller	285
Appeal from state board of health not retroactive	Editorial	109
Appendicitis	Shirk	432
Misleading conceptions in the treatment of	Crowell	504
Association button	Editorial	713
Awakening of public conscience	Editorial	528
B		
Bequests to St. Louis institutions	Editorial	41
Bladder, traumatic rupture of	Dalton	159
Blindness, prevention of	Editorial	174
Boards of health, responsibility of	Hamel	353
Book reviews		61, 124, 188, 252, 396, 542, 603, 669
Burial of persons dying from smallpox and other contagious diseases	Editorial	177
Burn	Reiley	634
C		
Cæsarean section, vaginal	Sheldon	441
Capital punishment, a trait of barbarism	Lockwood	683
Care of breasts and nipples during pregnancy and the puerperium	Swahlen	747
Carson convicted	Editorial	242
Catheterization of ureter	Lewis	146
Cerebro-spinal meningitis	Goins	94
Cholecystitis, primary, from typhoid infection	Brummall	439
Commentary, a	Editorial	369
Conjunctival reaction to tuberculin	McAlester, Jr.	741
Conservatism in medicine	Brosius	428
Constitution and by-laws for Missouri Society of Medical Secretaries		187
Missouri State Medical Association		375
Consumptive, care of	Schauffler	273
Correspondence—		
Letter to the editor		47, 184, 590, 726
Tuberculosis, war against		46
Councilor districts and counties in each district		126, 323, 399
Counter-prescribing	Editorial	175
County medical society, the	Mitchell	293

SUBJECT. AUTHOR. PAGE.

County societies, notes from:
Atchison. 248, 781
Benton. 460, 781
Boone. 460
Butler. 537
Caldwell. 52, 316, 597, 781
Cape Girardeau. 52, 186, 390, 460, 537, 597, 730
Carroll. 461
Carter-Shannon. 538
Cass. 116, 248
Chariton. 52, 461, 663, 782
Clark. 761
Clay. 462
Clinton. 316, 390
Cooper. 248, 390, 462
Daviess. 116, 538
Gasconade-Maries-Osage. 186, 663
Greene. 53, 117, 249, 317, 462, 598
Hall. 391
Harrison. 118
Henry. 54, 463, 598, 782
Holt. 119, 250, 317, 539
Howard. 318, 464, 509
Howell. 464
Jackson. 318
Johnson. 250, 730
Laclede. 539
Lawrence-Stone. 464, 664
Lewis. 466
Linn. 250, 319
Livingston. 392, 539
Madison. 392
Marion. 540, 665, 732
Moniteau. 251, 666
Monroe. 57
Pettis. 393, 509
Pike. 540
Platte. 58
Polk. 119
Ralls. 187
Ray. 393, 540
Schuyler. 59, 394, 541
Scott. 320, 732
Shelby. 59, 667
Ste. Genevieve. 58, 600, 732
St. Joseph-Buchanan. 58, 120, 251, 394, 541, 733, 782
St. Louis City. 252, 666
Webster. 60, 668
Cystocele. . . . . Beedle. 163

D

Daily press and medical news. . . . . Editorial. 529
Defense fund. . . . . Editorial. 37
Diseases of the skin and other organs of body. . Duncan. 1
Doctor in politics. . . . . Beers. 576
Echinacea augustifolia. . . . . Clark. 445

SUBJECT.	AUTHOR.	PAGE.
E		
Editorial notes		178, 244, 302, 370, 455, 531
Empyema, drainage spool for		172
Endocarditis	Triplett	543
Examination questions, state board of health of Missouri, June 1, 3, 5, 1908		313
Eye, rheumatic and gouty affections of	Sherer	605
F		
Fatty degeneration of heart	Zwart	203
Feces, examinations of, as routine procedure	Myer	83
Femur, treatment of fracture of shaft, by plaster of Paris and light iron splints	Deffenbaugh	477
Filariasis nocturna	Grindon	129
Fissure in Ano	Coffey	553
Fracture of femur	Deffenbaugh	477
G		
Gall-bladder and biliary passages, personal observations in the pathological anatomy of	Bartlett	65
Surgery of	Potter	76
Gall stone diseases, symptoms of	Hill	71
Gas distention of abdomen after operation	Moenninghoff	193
General practitioner in country	Highsmith	618
Government control of public health	Morroway	744
Gumma of external nose	Wever	571
Gunshot wounds, personal experience in	Seba	700
H		
Headache, interpretation and treatment of	Clark	612
Heart muscle, prophylaxis of fatty degeneration of	Zwart	203
Henry's rubber drainage spool for empyema of the chest	Benker	172
Hip joint disease	Schulz	227
History of amputations I have done above the shoulder joint	Halley	25
Hodgen's splint	Robinson	763
I		
Incident, with a moral	Editorial	713
Industrial aspect of longevity	Editorial	584
Inflammation of mucous membranes of upper air passages	Statler	756
Inmates of state institutions, care of	Editorial	583
Insanity, prophylaxis of	Robinson	484
International Congress on Tuberculosis	Editorial	106, 238
Delegates to	Editorial	243
Inversion of uterus, with expulsion of necrotic myoma	Hinchey	507
J		
Jefferson City meeting	Editorial	708
K		
Kidney stones, pathological, clinical and surgical phases	Cordier	152
Knee-joint, infections of and treatment	Kirchner	198

SUBJECT.	AUTHOR.	PAGE.
L		
Lachrymal sac, excision of, as radical cure for chronic inflammatory processes thereof	Williamson	547
Removal of	Thompson	233
Lay mind, credulity of	Kirkpatrick	629
Legal opinion, a commendable	Editorial	706
Legislature, status of medical bills in	Editorial	642
Leukemia	Donohoo	34
Library, Missouri University, open to members	Editorial note	110
Longevity, industrial aspect of	Editorial	584
Lupus erythematosus	Kanoky	401
M		
McCormack, Dr., coming in May	Editorial	586
Itinerary for		644
Visit	Editorial	710, 778
Malpractice, from the doctor's standpoint	Ashley	691
Martin, Prof., visit to St. Joseph	Editorial	40
Maternity hospital in St. Louis		111
Medical advertising, bill to prohibit certain classes of		657
Association of the Southwest		301, 384
Club	Editorial note	110
Defense of members	Editorial	453
Education, report of committee on		309
Hyenas	Editorial	643
Inspection of schools	Editorial	451
Legislation, proposed	Editorial	448
News and the daily press	Editorial	529
Meningitis, cerebro-spinal	Goins	94
Mesenteric lymph-nodes, tuberculous adenitis of	Rassieur	521
Midwifery in its relation to abortion and the laws of the state	Winn	636
Missouri society of medical secretaries, constitution and by-laws for		187
State Sanatorium for Incipient Pulmonary Tuberculosis, suitable patients for	Brown	342
University Library open to members	Editorial note	110
Mount St. Rose Hospital, clinical reports from	Cameron	349
N		
National public health movement	Overholser	493
Nervous disease, prostate as factor in	Boehm	556
"New" tuberculosis cure	Editorial	367
New and non-official remedies		42, 110, 122, 189, 245, 303, 395, 601, 646, 734, 779
News notes		112, 181, 304, 456, 533, 588, 714
North Missouri Medical Association	Editorial	42
Nose, gumma of	Wever	571
O		
Obituary:		
Alexander, G. W.		183
Allen, James Tate		459
Baker, Wilfred L.		536
Bartscher, H. W.		246
Bribach, Benno		592

SUBJECT.	AUTHOR.	PAGE.
Obituary:		
Caffee, Amos H		308
Crellin, William K		183
Gamble, David Coalter		43
Highsmith, George Rolla		591
Logan, John S		591
Matson, James Thornton		373
Randolph, Arthur G		373
Reiley, John F		115
Roberts, Clarence F		592
Ross, Joseph Bernhard		45
Whitney, L. E		183
Oesophagus, stricture of	Fulton	13
Officers of affiliated societies		64, 127, 256, 324, 400
Officers of Missouri State Medical Association		63, 126, 190, 255, 322, 398
Operations, major, in private houses	Putman	573
Ophthalmic vaccination, accidental	Derwent	444
Ophthalmo-tuberculin reaction	McAlester, Jr.	257
Opsonic theory	Freudenberger	99
Optometry bill defeated	Editorial	645
House bill No. 411—a warning	Editorial	586
Or the practice of medicine made easy	Williamson	580
Organization, systematic, in Kansas City	Editorial	41
Otitis media	Coffelt	671
Oto-Laryngology, unclassified conclusions in	Ewing	19
P		
Passing of an old therapy	Peak	218
Pay your dues	Editorial	710
Physician's relation to the pharmacist	Ormsbee	512
Pneumonia	Brown	91
Causes and treatment	Newlon	677
Pneumopleuritis followed by pulmonary abscess	Blackmore	168
Pregnancy, complicated with fibroid tumors	Dorsett	481
Care of breasts in	Swahlen	747
Prescribing ready-made remedies, means to prevent	Sayre	418
Prevention of blindness	Editorial	174
Preventive medicine, triumphs of	Editorial	108
Program, fifty-second annual meeting		593, 658, 718
Prophylaxis of insanity	Robinson	484
Prostate as factor in nervous disease	Boehm	556
Pseudomyxoma peritonei	Campbell	289
Psychiatry, advance of	Editorial	39
Public conscience, awakening of	Editorial	528
Policy and legislation, recommendations of committee	Editorial	297
Public health, government control of	Morroway	744
State's duty in conservation of	McConnell	735
R		
Radium, therapeutic value of		767
Railway spine	Dudley	224
Rectal disease, early attention	Minor	759
Relation between diseases of the skin and diseases of other organs of body	Duncan	1
Report of committee on medical education of Missouri State Board of Health		309
Revocation of license, bill to prohibit practice pending appeal		656
Roentgen ray as an aid to the diagnosis of tuberculosis of the lungs, with demonstration of diagrams and new orthodiascope	Engelbach and Carman	209
Rupture of bladder	Dalton	159
S		
St. Louis health department, work of, in its relation to tuberculosis	Bond	356

SUBJECT.	AUTHOR.	PAGE.
St. Louis Institutions, bequests to	Editorial	41
Skin and Cancer Hospital	Editorial	645
Sanitary construction and furnishing of churches, halls and public assembly rooms	Vandivert	97
Measures before the legislature	Editorial	527
School hygiene	Editorial	41
Schools, medical inspection of	Editorial	451
Skin and Cancer Hospital, St. Louis	Editorial	40, 645
State association journal, new	Editorial note	111
State board of health, appeal from, not retroactive	Editorial	109
Bill to authorize subpœna of witnesses		656
State sanatorium for incipient tuberculosis	Editorial	449
State's duty in conservation of public health	McConnell	735
State's duty to its citizens from a medical standpoint	McComb	235
Stomach disorders, sphere of modern surgery in the relief of	Pearse	6
Stones in kidney		152
Stricture of œsophagus	Fulton	13
Surgery of gall bladder	Potter	76
In stomach disorders	Pearse	6
Surgical cases, preparatory and after-treatment of	Barger	566
Symptoms of gall stone diseases	Hill	71
T		
Therapeutics	McKelvey	516
Its relation to the practitioner	Whiteley	696
Tinea sycosis	Lockwood	752
Tompkins, Doctor Junius, biographical sketch of		466
Traumatic neurosis, or railway spine	Dudley	224
Tubercular infection, public education against	Lockwood	278
Tuberculous adenitis of mesenteric lymph-nodes	Rassieur	521
Tuberculosis commission	Editorial	38
Early positive diagnosis of, and use of tuberculin in diagnosis and treatment	Schorer	263
International Congress on	Editorial	106, 238
Of lungs, roentgen ray in diagnosis of	Engelbach and Carman	209
Progress in fight against	Editorial	299
Work of St. Louis health department	Bond	356
Tumors, fibroid, of uterus, complicated with pregnancy	Dorsett	481
U		
Universities and colleges as factors in the anti-tuberculosis educational campaign	Miller	285
Ureter catheterization in relation to diagnosis and treatment	Lewis	146
Uterus, inversion of, with expulsion of necrotic myoma	Hinchey	507
V		
Vaginal Cæsarean section	Sheldon	441
Visceral ptosis, treatment by respiratory exercises	Shattinger	325
Vital and mortuary statistics, bill for		647
Vital statistics in Springfield	Editorial	587
Vital statistics assured	Editorial	709
W		
Warts and moles, danger of permitting to grow	Babler	405
Ways and means to overcome the practice of prescribing ready-made remedies and proprietaries	Sayre	418